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USSR Report

ENERGY

No. 20

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ELECTRIC POWER

FUEL CONSERVATION TECHNIQUE IN DISPUTE

Problem Explained

Moscow EKONOMICHESKAYA GAZETA in Russian No 2, Jan 80 p 15

[Article by P. Luzin and V. Permyakov, department heads at the NPO [Scientific Production Association] for research and design of power systems imeni Polzunov, entitled "Inexcusable Slowness"]

[Text] It is known that approximately one half of all mined and open pit coal (excluding coked coal) is burned at our thermal electric generating stations. In the future, the proportion of solid fuel consumption at generating stations will grow and that of liquid fuel will be curtailed. The importance of the search for savings in the more efficient use of fuel once again was emphasized at the November (1979) Plenum of the CC CPSU.

Power machinery builders in collaboration with power engineers direct much effort toward achieving the maximum economy in coal, especially at large thermal electric generating stations. The leading role in the implementation of progressive developments belongs to the technical administrations and the scientific and technical councils of the USSR Minenergo [The Ministry of Power and Electrification] and Minenergomashina [The Ministry of Power Machine Building]. In recent years they have examined a number of effective measures.

For example, the proposal of the Scientific Production Association for research and design of power systems imeni Polzunov (NPO TsKTI, Leningrad) and the All-Union Heat Engineering Institute imeni Dzerzhinskiy (VTI, Moscow) for the application in steam turbine plants of preheaters of the low pressure mixing type instead of the surface type equipment was evaluated as having merit.

Now, mixing preheaters designed by the NPO TsKTI have been placed in operation at 18 power plants of 300,000 kilowatt capacity each, and those designed by the VTI, at six similar power units. It has been demonstrated that these preheaters have high reliability. The estimated savings for one 300,000 kilowatt power plant is equal to 2,000 tons of conventional fuel, and for a 500,000 kilowatt plant, it is 5,000 tons.

Minenergomash and Minenergo USSR therefore recently decided to organize the serial production of mixing type equipment and the widespread introduction of it on power units of thermal and nuclear power stations.

But some other new developments, obviously, are not so lucky. Specifically, there is the question of the introduction of the so-called open systems for preparing fuel for burning. Associates at the NPO TsKTI worry about the fact that the quality of the coal being received at electric generating stations is deteriorating. Its increasing ash and moisture content, which lead to reduced calorific value, is being reflected negatively in the technical and economic indicators of the production of electric power.

We will not dwell here on the questions of improving the quality of the coal delivered. The USSR Ministry of the Coal Industry has resources for increasing the quality of the fuel being extracted and they must be used. However, they surely are not helpless and ourselves - we are power engineers.

In recent years, an investigation was carried out at the NPO TsKTI on coal as a power producing fuel and on the stages of preparing it for burning at electric generating stations. There, to a significant degree, its economic effectiveness is determined by moisture content. The so-called closed systems of preparing coal for burning, which at present are in widespread use at generating stations, require the delivery of coal having a small and stable moisture content.

Open systems for preparing coal for burning were developed by scientists of the NPO TsKTI. These systems differ from the closed systems in that the water vapor being separated from the coal in the drying process is not fed into the combustion chamber of the boiler, but is discharged to the atmosphere after separation from the coal dust. The drying is accomplished by the boiler flue gases which, in turn, permits a substantial increase in the efficiency of burning the fuel.

At present, in our country and abroad, at a series of plants favorable experience has been accumulated on the use of open systems for preparing coal and lignite for burning. The specific consumption of conventional fuel per generated kilowatt hour is reduced and the efficiency of the operation of the power unit increases. It has been demonstrated that for a 200,000 kilowatt power unit, the fuel saving amounts to about 10,000 tons a year. The most efficient open systems will be on those GRESs where the principal kinds of fuel are gaseous or long-flame coal and lignite.

The results of the work carried out by the NPO TsKTI in due course were approved by Minenergo of the Ukrainian SSR and at the Institute of Complex Fuel-Energy Problems in USSR Gosplan (VNIKTER). They were recommended for use to an All-Union scientific and technical conference considering the question: "The use of open systems of pulverization with steam and gas drying of the fuel at thermal electric generating stations with 300,000, 500,000 and 800,000 kilowatt units having supercritical pressure." A pos-

itive evaluation of the work of the scientists was found also at a republic scientific and technical conference having the agenda: "The use of Donets gaseous coal at electric generating stations of the Ukrainian SSR".

Nevertheless, after several years, the question about the introduction of these progressive systems is not decided. As result, a substantial reserve of saved fuel is not being used.

What is preventing the introduction of the open systems? The main obstacle is the position taken by the technical administration and the scientific and technical council of Minenergo USSR. They are not giving the "go-ahead", pleading an absence of extensive experience in the use of similar systems.

The position is clearly unwarranted. In fact, it is known that from 1973-1974, at one of the largest electric generating stations in the Ukraine, two 200,000 kilowatt units were fitted with the open systems. Both are the most economical at the GRES. A third power unit is also being equipped and, in the future, it is planned to convert all the power units here to the open system. Furthermore, guided by the experience in the operation of the 200,000 kilowatt units, workers at a number of generating stations of the Ukraine are not waiting for the official decision of the technical administration of Minenergo USSR. They are planning to transfer 300,000 kilowatt power units operating on coal and anthracite coal dust over to these systems.

Preliminary calculations carried out in the design of 300,000; 500,000 and 800,000 kilowatt power units show that the economic effect of the use of open systems of preparing fuel amounts to about one ruble per installed kilowatt of power.

We think that Minenergo USSR should display a great deal of activity on this.

Responses to Article

Moscow EKONOMICHESKAYA GAZETA in Russian No 19, May 80 p 16

[Article entitled "Two points of View on One Problem"]

[Text] In the second issue of EG for this year, the article "Inexcusable Slowness" was published. Briefly, it contained the following: P. Luzin and V. Permyakov of NPO TsKTI wrote about the search for, and implementation of efficient methods of burning fuel at electric generating stations. A number of the installations, providing impressive savings of coal, are being adopted. "But some other new developments, obviously, are not so lucky" they said in their article. They went on about the so-called open systems of preparing fuel for burning. In the opinion of the authors,

the main obstacle is the position taken by the technical administration and the scientific and technical council of Minenergo USSR.

In response to that article, the editor received an answer from V. Gorin, chief of the main technical administration on the operation of power systems of Minenergo USSR. It is presented here with some abbreviation.

In the article "Inexcusable Slowness" a question having great importance for the national economy is properly raised. At the same time, it is impossible to agree with the evaluations given by the authors of the article of the effectiveness of the use of open systems of preparing fuel.

In 1972-1974 the open system of pulverization, in an experimental form, was installed on two power units, each of 200,000 kilowatts at the Burshytynskaya GRES. In accordance with decisions of Minenergo USSR and Minenergomash, special tests were carried out on them by organizations of Minenergo. The results of these tests were published in the technical literature. It was established that the use of open systems of preparing fuel for burning does not work out well in providing increased efficiency in boiler operation because of a supplementary loss of fuel to the atmosphere through the dust collectors of the open system.

Further experience with open systems on boilers operating on lignites (Irkutskaya TETs-6) and on gaseous coals (Burshtynskaya GRES, Cherkasskaya TETs) confirmed the conclusions, and revealed another large deficiency of the system. To date this deficiency has not been eliminated. In these circumstances, the widespread application of open systems of preparing the fuel in the burning of coal and lignite cannot be recommended.

In connection with the deteriorating quality of anthracite coal dust, the question of the possible use of open systems on boilers burning this fuel in power units with capacities of 200,000 or 300,000 kilowatts is being considered by organizations of Minenergo USSR.

Upon receiving the answer of V. Gorin, the editor asked N. Markov, general director of the NPO imeni Polzunov to express his opinion about the problem. Here is his letter.

The open pulverization system was installed on two power units at the Burshtynskaya GRES according to an initiative of the NPO imeni Polzunov (Leningrad), the All-Union Heat Engineering Institute imeni Dzerzhinskiy (Moscow), and L'vovenergo [L'vov Power Trust?] contrary to the negative position of Minenergo USSR. Almost seven years of operation of these units has shown their high reliability, manageability, and economic effectiveness in comparison with closed systems of pulverization. The saving amounts to about 100,000 rubles per year for one 200,000 kilowatt power unit. Among other things, the saving of fuel is expressed in a reduction of specific fuel consumption.

Comrade Gorin, in his reply, is making use of data from articles published in 1976 by one of the four participants of tests of a boiler with the open pulverization system at the Burshtynskaya GRES; namely, a representative of Soyuztekhenenergo [expansion unknown]. These data were refuted by the remaining three participants: the NPO imeni Polzunov, the Burshtynskaya GRES, and L'vovenergo. (Article in the journal ENERGOMASHINOSTROYENIYE No. 7 '77) The increased efficiency of the boilers with the open system of pulverization also is confirmed at all other electric generating stations where they are in use.

Thus the claim of the main technical administration of Minenergo USSR that the open pulverization system of the NPO imeni Polzunov does not give increased efficiency, does not conform with reality. The second claim, that the operation of the open systems supposedly is accompanied by certain negative consequences, also is unfounded.

Rejecting the merits of the broad application of the open pulverization systems, V. Gorin admits the possibility of their use on 200,000 or 300,000 kilowatt units operating on anthracite coal dust. It should be noted that the advisability of this was established by the NPO imeni Polzunov several years ago. But, regrettably, the technical administration of Minenergo USSR is not in a hurry about their introduction although, in fact, the conditions of the use of fuel at many generating stations of Minenergo of the Ukrainian SSR would have been sharply improved.

Many years of experience in the use of open pulverization systems of the NPO imeni Polzunov confirm the merits of their widespread application for any fuels, and that the system saves fuel and increases the reliability and economic efficiency of power plants. The impression is created that in composing the answer to the article "Inexcusable Slowness", the chief of the technical administration of Minenergo USSR, regrettably, did not acquaint himself with the results of the operation of the open pulverization systems on his very own electric generating stations.

From the editor: So the question raised in the article published in EG remains open. The main technical administration of Minenergo USSR and the NPO imeni Polzunov occupy opposing positions. The matter touches upon the possibility of a substantial saving of fuel at many thermal electric generating stations. The editor hopes that P. S. Neporozhniy, the USSR Minister of Power and Electrification, and V. V. Krotov, the Minister of Power Machine Building, together will clarify the matter fully.

9136
CSO: 1822

ELECTRIC POWER

NUCLEAR ENERGY IS POWER ENGINEERING FUTURE

Kiev PRAVDA UKRAINY in Russian 27 Apr 80 p 3

[Article entitled: "Power Engineering Looks to the Future"]

[Text] Kiev 26 April (RATAY [Radio Telegraph Agency of the Ukraine])
A reliable scientific basis for the further development of power engineering has been created in the USSR. Such is the main conclusion of a conference on this problem which is ending today in the capital of the Ukraine.

Academician G. Ye. Pukhov of the Academy of Sciences of the Ukrainian SSR and chairman of the organizing committee of the conference, reported that the key direction for the growth of the energy producing capacities of the Soviet Union, as was emphasized at the meeting of scientists and specialists from Moscow, Leningrad, Kiev, Minsk, Novosibirsk, Irkutsk and other cities of the country, is the construction of nuclear electric generating stations. Only in our republic, for example, because of AES [nuclear electric generating stations] is it envisaged to achieve more than one half of the growth in electric power in the Five-year Plan. The guarantee of assured development of nuclear power engineering is that the USSR is the first country in the world to have mastered the fast-neutron reactor. This establishes hopes for the successful solution of the problems of nuclear fuel.

Improvement of the efficiency of the operation of the giant nuclear electric generating stations to an important degree will enable the creation of energy complexes based on them. Besides the AES, these complexes will comprise pumped-storage hydroelectric stations to provide for the accumulation and subsequent release of energy during hours of peak demand. Such an approach already is being implemented in the construction of the South Ukrainian energy complex. In the next few years construction of several more giant installations is envisaged.

The contribution of researchers and skilled workers to the solution of other problems in this important branch of the national economy has been important. Among other things, mathematical and electronic "trainers" for

testing the reliability of power systems and equipment are being developed. Success has been achieved in the search for optimum designs of super powerful generators. Improved systems of automatic control have been proposed. The possibility of using untraditional sources of energy such as the sun, the wind, the heat in the depths of the earth has become more tangible.

About 400 scientific lectures and reports were heard at the conference, and paths for further investigation were outlined.

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ELECTRIC POWER

CHARACTERISTICS, FAILINGS OF BN-600 BREEDER REACTOR DESCRIBED

Duesseldorf WIRTSCHAFTSWOCHE in German No 18, 2 May 80 pp 14-16

[Article: "Late Breeder in the Ural Mountains"]

[Text] In the Ural Mountains, the world's largest fast breeder was put in operation. Moscow's PRAVDA celebrated this as a "great victory" of the Soviet power industry. However, a high price had to be paid for this.

The BN-600, the third unit alongside two thermal reactors in the Beloyarsk Kurschatov Nuclear Power Plant, was put in operation on 22 April, Lenin's birthday. Actually, the "giant in the Ural Mountains"--as the party organ PRAVDA usually calls the world's largest fast breeder--was supposed to have been completed much sooner.

In 1971, the 24th CPSU Congress stipulated that by 1980 the nuclear power capacities total 30,000 megawatts. The 25th Congress of 1976 had to reduce the target to 19,000 megawatts. In fact, by the end of this year (present level: approximately 11,000 megawatts) the total capacity is unlikely to exceed 13,500 megawatts. The share of nuclear power of the country's total energy supply would then have increased from 3.2 percent in 1975 to between 7 and 8 percent.

The Soviet energy planners had originally wanted 1,000-megawatt fast breeder units to start "breeding" this year. Last fall, however, Nikolay A. Dolleshal, the former head designer at Obninsk, the first Soviet nuclear power plant, published in KOMMUNIST, the theoretical organ of the Central Committee, a much discussed article containing the surprising statement "that the difficulties in regard to the construction of economical nuclear power plants equipped with the promising breeder reactors are greater than expected." Dolleshal, who presently heads the Energy Department of the Academy of Sciences, attributed the difficulties to the unsolved problems involved in the use of liquid sodium as a coolant.

Whereas Anatoliy P. Aleksandrov, president of the Soviet Academy of Sciences and distinguished nuclear physicist, had expected the series production of breeder reactors to start at the beginning of the 1980's, Dolleshal stated that "according to current views" this would be feasible at the end of this millennium at the earliest.

Accordingly, the planned savings of uranium 235, the reserves of which will be exhausted in a few decades, could not be effected before the turn of the millennium. Originally, it had been planned to skip the stage of water-moderated reactors by stepping up the construction of breeder reactors, which convert the plentiful uranium 238 into plutonium 239 and produce more nuclear fuel than they consume.

Despite all the critical comments, at the November Central Committee plenum party leader and chief of state Leonid I. Brezhnev personally took up the old demand for "large-scale construction of breeder reactors." However, the most recent experience gained in Beloyarsk and the previous mishaps in breeder development indicate that this will not come to pass so soon. To be sure, two test breeders--the BR-5 unit in Obninsk since 1958 and the BOR-60 in Dimitrovgrad since 1969--have so far been operating quite reliably. However, as regards its first industrial breeder reactor, the BN-350 in Shevchenko on the Mangyshlak Peninsula, which was put in operation in July 1973, the Soviet Union has had no luck.

The unit has a capacity of 125 megawatts and it desalinates 120,000 cubic meters of sea-water per day. Shortly after the plant was put in operation, there arose problems in connection with the steam generator. The rupture of a cooling pipe triggered a big sodium explosion. Of the six cooling pipes originally installed, one remained irreparable for years. At present, the breeder reactor is operating at no more than 65 percent of its capacity.

Thus the designers directed a great deal of attention to the Beloyarsk steam generator. The fragility of the cooling pipes was reduced through a new welding process. The designers also installed an additional control system.

In the press, however, the dangerous complexity of breeder technology was discussed no more than its efficiency or the cost of its development. Several months before the start-up of the BN-600, the Party Committee of Sverdlovskaya Oblast, in which Beloyarsk is located, concerned itself about expansion of the plant and requested additional nuclear reactors for the Ural region.

But for the communist superpower, the road to the plutonium society is as laborious as it is for the Western industrial states. The Soviet power plant builders are greatly troubled by the inefficiency of the planned economy. Laziness, lack of interest, insufficient organizing skills and technological backwardness are serious obstacles that slow down the development in the East.

In order to be able to put the BN-600 in operation on 22 April, the builders had to mobilize the last labor and material reserves. For months, the Beloyarsk construction workers, technicians and scientists were subjected to a torrent of pepping-up slogans. Competitions were organized. Reporters of the government organ IZVESTIYA, who helped the enterprise to union-wide publicity, and a special staff of the Sverdlovsk Oblast Committee of the Party daily inspected the progress of the construction and installation work.

However, slogans cannot compensate for lack of expertise: The general contractor for the breeder project was several months late in supplying the technical documentation. Equipment and materials were defective or late. There was a shortage of spare parts for the as yet nonstandardized equipment. The construction proposals of the Leningrad "Elektropul't" Plant, the main supplier of control consoles, panels and switchboards, were based on 25-year-old solutions. In July, a Perm cable plant was in arrears in regard to delivery of over 100 kilometers of special cable. A turbogenerator produced in Kharkov was left and forgotten for 45 days on a siding of the Aktyubinsk railroad station.

Not only executive personnel, but also skilled workers were in short supply. The result: It was not possible to install or even store the equipment delivered.

As usual, everyone and no one was responsible for this deplorable state of affairs. People blamed each other or helped each other in hushing up sloppiness, bungling and incompetence. In the end, it was only through a "patriotic movement" that the punctual start-up of the BN-600, on state founder Lenin's 110th birthday, could be ensured.

At long last, the giant breeder reactor has been completed, but it is open to doubt whether the pride displayed by the Soviets is justified. Like the other red breeders, the BN-600 lacks a safety containment shell, an emergency cooling system, a back-up shut-off system and protection against external dangers.

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CSO: 1826

ELECTRIC POWER

ELECTRICAL EQUIPMENT PRODUCTION INSTITUTE BASED ON COST ACCOUNTING

Moscow EKONOMICHESKAYA GAZETA in Russian No 12, Mar 80 p 15

[Article by Yu. Zhukov, director of the All-Union Planning-Design Institute of Electrical Equipment Production, and M. Grebennik, head of the section: "Cost Accounting Indicators at the Basis"]

[Text] The sphere of influence of our all-union planning-design institute is the preparation of series production for electrical engineering items of new designs, automation of the metal-working processes, mechanization of the auxiliary operations, and guarantee of saving of material and labor resources in the associations and at the branch plants. Since the institute switched to a cost accounting system of work several years ago for the development, mastery and introduction of new equipment based on orders (contracts), the indicators of its activity have greatly improved. The periods for scientific research and experimental design work have been reduced from 4.5-5 years to 3-3.5 years. The Ministry of the Electrical Equipment Industry has put plants into operation at which the developments of the institute were used to organize series manufacture of special technological equipment with total cost of 7-8 million rubles per year. In addition, our experimental production supplies equipment costing 3 million rubles.

We are striving to correctly employ the principles of the cost accounting system in practice. Today, planning begins with a comprehensive technical and economic substantiation of the scientific themes to be included in the order program. For us it is important not only to complete a certain theme, but also to introduce the created equipment. Therefore, the technical and economic substantiation indicates both the plants at which the experimental-industrial application will be implemented, and those enterprises where the results of the development will find broad industrial use.

The fulfillment of the scientific research and experimental design work generally is stipulated in the plans for the new equipment at these enterprises. As a result, the institute annually introduces into production 500-600 units of new production equipment.

A lot of attention is being given also to developments on economic contracts with enterprises, as well as on contracts for creative cooperation. Annually this work is done for 110-120 plants of the electrical equipment industry. We involve other scientific institutions, VIE's, as well as institutes of the USSR Academy of Sciences in the realization of the contracts.

As is known, during the transition to the new system three funds of economic stimulation are formed in the scientific research institute, including a fund of material incentive. In order to set up the awarding of bonuses to the developers depending on the final efficiency of their activity, we employed a system of corresponding indicators, and brought it to each section and laboratory. The following cost accounting indicators have already been operating for a number of years: volume and nomenclature of work; economic effect from introducing developments (fixed according to the acts of the enterprises), saving of labor of the workers by means of taking measures for new equipment; saving of metal; observance of outlay estimates for fulfillment of scientific research and planning-design work.

Material incentive of the designers and production engineers in our institute is only implemented from the resources that we receive from enterprises, and then in the sections depending on the effect from using the new equipment and technology we developed and introduced. We use these resources for additional incentive of the direct developers of equipment (one-time bonus) and to stimulate the workers to fulfill individual assignments on the thematic plan of the section and institute. Up to 75% of the resources coming from the industrial enterprises are used for one-time rewarding of specific developers.

We indicate that the one-time bonuses to the most distinguished designers and production engineers reach 1.5 of the salaries. The circle of individuals and the sizes of these bonuses are closely linked to the quality and quantity of work done in the development and introduction of advanced technology or special equipment.

The goal of the rewarding for the fulfillment of individual assignments of the thematic plan is the acceleration and improvement in the technical level and quality of work. The heads of the sections have fairly broad potentialities for encouragement of workers who have achieved high results here.

On the other hand, the size of the incentive is reduced for the executors who have permitted neglect in their work, violation of the assigned periods, and a low technical level. Thus, in the section for mechanization of transportation work the amount of the bonuses last year fluctuated in limits from 40 to 1% of the salary. The increase, or on the contrary, the decrease was made with the agreement of the trade union organization.

The transition in the 11th Five-Year Plan to a system of accounts for work that is completely finished and accepted by the customer instead of

partial payments will become a new stage in the cost accounting activity of the institute for orders. The introduction of the given order is linked to the conducting of extensive preparation. And we are preparing for this step.

In particular, the institute is now developing regulations for the fulfillment of design and technological work. They make it possible for substantiated plans for periods to begin and complete the work on all levels: technical control of the ministry-all-union industrial association-institute.

It is extremely important to achieve uniform completion of the themes for the months in each quarter. For this purpose, the institute has made a decision to switch to monthly planning for the fulfillment of scientific research and experimental design work instead of quarterly. The indicator for uniformity will be brought to the sections and laboratories as cost accounting.

The sections are now compiling long-term schedules for 5-6 years, according to which newly "discovered" scientific themes are planned.

One should note, that a number of principles of the cost accounting system have not yet been completely realized in practice, although this is far from the first year they have been used. For example, we have not yet succeeded in establishing the sources and sizes of the resources for economic stimulation during the approval of the orders. The responsibility of the industrial enterprises for the timely and complete use of the new equipment they ordered, as well as for the transfer of resources to the fund of economic stimulation of the institute has not been legalized.

In light of the decisions of the party and government on perfecting the economic mechanism it remains to considerably reconstruct the organization of work in the scientific research institutes and design offices. Certain experience has been accumulated in the electrical equipment industry, as in certain other branches. But the main work lies ahead. It is necessary to set up on the ministry scale a unified fund of development for science and technology, and to guarantee its correct and effective use.

9035
CSO: 1822

ELECTRIC POWER

LENINGRAD PLANT PRODUCES HYDROELECTRICAL EQUIPMENT

Moscow EKONOMICHESKAYA GAZETA in Russian No 12, Mar 80 p 4

[Article by A. Shevtsov: "For the Giants of Power Engineering"]

[Text] All of our power plants are designated on a geographical map of the country that hangs in the museum of the association "Leningradskiy Metallicheskii zavod." The majority of them are equipped with turbines of the "IMZ" brand. At the same time they are the largest power plants. Now, for example, the Leningraders are fulfilling the orders of the Sayano-Shushenskii, Nizhnekamsk, Zeyskiy, Chiboksara GES, and the Syrdar'ya and Ekibastuz GRES...

It is written in the commitments for this year: "Complete ahead of schedule by 2 months, by the birthday of Vladimir Il'ich Lenin the manufacture of the 10th steam turbine with output of 300,000 kilowatts that will complete construction of the Syrdar'ya GRES, one of the largest in the USSR."

The factory workers are striving to make each 300,000 kilowatt turbine better and more advanced than the one before. An innovation will appear in the Syrdar'ya GRES order that will permit a reduction in the fuel consumption by 1%. The annual saving will be 6,000 T of coal for one unit.

The multiton working wheel No 4 for the Nizhnekamsk GES is being manufactured in the hydroturbine shop. The machine builders here are faced with accelerating the work rates. By 22 April they have planned to master the new group technology for manufacturing working wheel disks on the line of machines of the "machining center" type. This measure alone will permit an improvement in the quality and increase in the labor productivity by 40%. The new technology for manufacturing large working turbine vanes on the profile-forming machines with digital program control will provide a 30% increase in output. A considerable time benefit will be obtained from introducing electrosag smelting of parts and directed crystallization.

The enterprise is focusing serious attention on increasing the equipment load, especially the unique equipment. Thus, the coefficient of shift work of the metal-cutting mills is already greater than 2, and of the forging-press mills approaches 2.5. This year more than 100 units of outdated equipment will be replaced by 50 special and aggregate machines, including 25 with programmed control.

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CSO: 1822

ELECTRIC POWER

LENINGRAD PLENUM DISCUSSES FUEL, ENERGY PROGRAM

Moscow IZVESTIYA in Russian 17 Apr 80 p 2

[Article by TASS correspondent: "On the Level of New Requirements"]

[Text] Dozens of scientific research and planning institutes, VUZ's, design offices and enterprises in the city have participated in the creation of a long-term program to increase the contribution of the people of Leningrad to the development of the country's fuel and energy complex, in light of the requirements of the November (1969) Plenum of the CPSU Central Committee and the instructions of Comrade L. I. Brezhnev. Its formulation is practically finished. The tasks of the Leningrad communists to realize the program were discussed at the Smol'ny plenum of the CPSU obkom that took place today.

According to the Leningrad plans, it was noted at the plenum, today one-third of the hydroelectric power plants in the country are being built, and the largest nuclear and thermal plants are being erected. Leningrad industry is producing steam turbines and turbogenerators, gas-turbine units and electrophysical equipment, a considerable part of the fuel apparatus, and diesels.

The plenum participants stressed that it is important to organize purposeful work to realize the program in each collective, and at every section. The need was discussed for improved training of specialists and increase in the responsibility of the personnel for the work entrusted to them. Speaking of the problems of the efficient use of labor resources, the participants of the plenum noted that until now the task was set of increasing the volume of production at the active enterprises without increasing the number of workers. In the 11th Five-Year Plan this will need to be achieved by a reduction in their number.

It was stressed, that special attention needs to be focused on low-waste technology, advanced methods of forming, powder metallurgy and other modern technological processes, which in addition to saving of labor guarantee a significant reduction in the consumption of metal. The scientific research

institutes and design offices have been set the task of sharply reducing specific metal consumption for unit of output, and diminishing the weight and overall dimensions of the new equipment. The plenum also defined the paths for a further struggle of the Leningraders to save fuel and heat, and stressed the need for improving the vanguard role of communists in realizing the program to increase the contribution of the toilers of the city and oblast in the development of the country's fuel and energy base.

The plenum assured the CPSU Central Committee, Politburo and Comrade L. I. Brezhnev personally that the Leningraders will successfully cope with the tasks set by the party, and will meet the 110th anniversary of V.I. Lenin's birth and the 26th CPSU Congress with new labor successes.

G. V. Romanov, member of the Politburo of the CPSU Central Committee and first secretary of the Leningrad obkom spoke at the plenum.

9035

CSO: 1822

ELECTRIC POWER

MATERIALS SHORTAGES DELAY CONSTRUCTION OF CHERNOBYL' AES

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 2 Apr 80 p 2

[Article by Zh. Tkachenko, in-house correspondent: "You Cannot Replace Metal with Messages"]

[Text] "We have been idle for 1.5 months because of the lack of fittings." There is vexation in the voice of the deputy head of the construction administration of the Chernobyl' nuclear power plant Andryushchenko.

He had just returned from the main facility and immediately sat down in his coat and hat at the telephone. The question became more acute with the alternation of intercity conversations "What else should we do?" Finally, after talking to Smolensk Andryushchenko sighed with relief:

"They gave us a loan. How many times. We will urge on the machine at night. What can you do..."

I also did not know what to do. Only one thing was indisputably clear to me: to fill trucks and railroad cars with metal for construction of such scales is like filling a cistern with a thimble. It takes a long time, is false, and generally is not sensible.

What can be done? Perhaps, Gennadiy Leonidovich Gurskiy, director of the Dneprovskiy Dzerzhinskiy Metallurgical Plant is able to answer this question? Perhaps he knows a way to erect the main housing of the nuclear plant without fittings? Otherwise how can you understand that of the 1,430 tons of steel for the first quarter funds only one-tenth has been issued to Chernobyl'?

It is no accident that before telling about the construction site I began to speak of the metal. Things are happening here at the start-up facility that cannot be explained from the viewpoint of healthy thinking. And, it appears that they have to be appropriately evaluated. It is impossible not to notice them. For example, high-strength bolts are needed to install the separators of the main housing. They were ordered in time from the Magnitogorsk hardware plant (order 580-344, 8 tons). Instead of the bolts

the builders receive a telegram: "As of yet the question of providing the plant with structural hot-rolled steel has not been solved. As a result the plant has not accepted the order for execution. Deputy director of the plant A. Kol'tsov." This is how it is. The plan, the counter-commitments, the enthusiasm--everything is at an impasse. For what reason? Because of a bolt!

Recently, despite the evident imbalance of the plan and its material support a certain bashfulness has appeared in the conversation about the reasons for such phenomena. This is passing over in silence by those who are creating the confusion by the negligence, or those who do not have the proper responsible attitude towards the fulfillment of the orders. The criticism bypasses them. And strange as it may seem, the question is raised to those who suffer from another's irresponsibility: why do you put the blame on others. Don't you have any shortcomings? Use your internal reserves.

In fact there are shortcomings. There are time losses. Materials are not always used economically. There is a struggle with these phenomena. Assume that one can save so much metal, concrete, and so forth. But it is impossible to cover the shortage of fund deliveries with this saving. It would seem that there should not be any discussion about this. It has been counted on, planned--deliver! And if it was this way, there would be a different conversation about discipline at the construction site. And the struggle would be against a different kind of mismanagement. However, let us go to the construction site and see with our own eyes, as they say, what it means to "use internal reserves" under such conditions.

On the hastily welded working ladder, together with the chief production engineer of the first complex, Yuriy Stepanovich Utin we climb the multi-meter height of the main equipment housing. Here the famous brigades of the Chernobyl' builders Tukalo, Matveyev and Bokov are extending the reactor shaft upwards. Such a thrilling panorama, such a sweeping grandeur, scale and true beauty opens up from here that involuntarily the confidence is born that man is powerful and there is nothing he could not do.

But no joy is visible. People are working, holding in their irritation that is ready to burst out. It would be more accurate to say that they are not working, but worrying. The panels delivered from the Vyshgorod reinforced concrete plant have a different spacing, the joints do not coincide, and a perpendicular is not made. At this height, under a penetrating wind they have to think about and correct the plant's shortcomings. They would return the panels to the plant. But they cannot because the schedules are tight. Here they are happy with these items, the concrete workers say, it has been worse.

Deputy of the USSR Supreme Soviet, brigade foreman Vladimir Vasil'yevich Bokov shows the bristling fittings.

"The plan provides for us to install assembled designs, but we do not have them. In order not to be idle we are making them in a monolith. We are overconsuming cement, metal, and most importantly, an enormous amount of labor," he says.

"In order not to be idle" this is the main thought. And although they do not want to be idle, they have to be.

"Look at what we are working with," Nikolay Ivanovich Tukalo says indignantly showing scraps of conductors, carefully "pasted together." "We have not received welded cable for 2 years. There are not enough welded fittings. The cords are caprone, and in the daytime you cannot find them even with a light so we lift the loads by hand. What a situation!"

Truly vexing. Let us try to figure out why this happens. There is extensive and good experience behind the builders of the Chernobyl' nuclear plant. The first phase of the plant with output of 2 million kilowatts was built ahead of schedule, and it operates reliably and stably.

Last year the third unit entered the finishing stage. Its scheduled start-up is 31 December 1980. This is already the second stage of the plant. The builders have named the counter schedule in their commitments, 22 December.

In order for the start-up to take place on time this year it is necessary to carry out 80 million rubles worth of construction and installation work. The highest annual ceiling since the beginning of the construction was 65 million rubles. It is apparent from this how complicated the task is and how acute the problems that occur.

Uneven units of each phase is essentially starting-up the plant from zero. This means that absolutely everything needs to be done that has been planned, and in the most thorough manner. The construction is now 3 months behind the initial schedule. Consequently, the only way to timely start-up is all-possible acceleration of work. The advance schedules have been set volitionally. But after adopting them as real, the specialists are seeking those engineering and organizational solutions that would guarantee this reality. Intensification of thinking, working and know-how is going on at all levels.

At the construction site the traditional SU [construction administrations] have been eliminated and complexes of the main housing, external structures, nonproduction buildings, city construction have been set up that are subordinate to the deputy head of the administration for production, Vladimir Timofeyevich Gore. The interrelationship of the subdivisions, unit completion, distribution of transportation, delivery of materials and control over observance of the schedule have been improved. In the complexes the engineering and technical workers control production directly, and just as directly mix with the line personnel. Instead of the several sections of

personnel and other nonoperational services that previously existed in each SU, now these are all in one construction administration.

"We consider this scheme, especially under our conditions where the concentration of resources at one site is great, to be very effective," says the head of the construction administration Vasily Trofimovich Kizima. "Now we are supervised, not by the administrations, but directly by the course of construction. And this is felt in the work, although it is more difficult to work this way."

More difficult? Of course. The new organizational forms require the corresponding level of solution to new questions associated with the construction site, and first of all the material and technical supply. And it seems there should be no questions. For the customer and the contractor are subdivisions of the same ministry, the Ministry of Power and Electrification. The planners and the majority of the manufacturing plants are subordinate to it. However, in practical matters a single managing hand does not show itself in the best manner.

For example, the cranes were to appear at the main housing in the beginning of last year, but they only arrived in July. The people were not idle, but what work this was! As yet the planning documents have not been completely issued. They are being prepared by the Moscow institute "Gidroyekt." Because of this, in particular, they could not place the orders for the metal parts in time. "Soyuzatomenergostroy" could not provide the precast reinforced concrete, and therefore time was lost in making the designs in the monolithic form. The Kurakhovo boiler-mechanical plant of the same association "Soyuzatomenergostroy" last year underdelivered 320 tons of pipeline. They do not consider it necessary to pay debts. There are too many "cases." The improper practice was confirmed that resembles Odessa humor: "Everything that I owe you I will overlook."

It appears that in the Ministry of Power and Electrification there should be another attitude towards this most important construction site. The collective of workers of the Chernobyl' nuclear plant with their accelerated work deserve more attention from the ministry. And it has the right to count on understanding in the solution of any questions.

9035
CSO: 1822

ELECTRIC POWER

BRIEFS

ELECTRIFICATION OF BAM--Vlagoveshchensk (TASS)--The power transmission line that will open up the power route of the Zeya GES to the distant workers' settlements of the BAM [Baykal-Amur Mainline] builders has begun to be laid in the Amurskaya oblast. The electrification of the northern regions of the Amur area where BAM will pass is an important part of the development program of this vast region. Here the 600-kilometer IEP-200 [power transmission line] is already in operation. On it the power of Zeya is fed to Tynda and Yuzhnaya Yakutiya. Another two lines come from the unified Far East power system to the major BAM construction points, Prizoyak and Fevral'skoye. It remains to lay over 1,500 kilometers of new power routes on the Amurskaya oblast territory; they will become a component part of the powerful energy network that extends from Ust'-Ilim GES to Komsomol'sk-na-Amure. The stable power supply of the BAM zone will permit accelerated construction of the mainline. [Text] [Moscow IZVESTIYA in Russian 13 Apr 80 p 1] 9035

ELECTRICITY TO KOSTOMUKSHA--Surplus water of Lake Kuyto that is discharged over the rapids of the Kem' into the White Sea moved the turbine of the Yushkozerskiy GES. A current passed on the 70-kilometer IEP to Kostomuksha, where a powerful mining and enriching kombinat is being erected. [Text] [Moscow EKONOMICHESKAYA GAZETA in Russian No 12, Mar 80 p 3] 9035

ADYCHA GES--Yakutsk--There was a time when the Bratsk GES was considered the country's northernmost, and serious scientific discussions were held on the possible construction of hydroelectric power plants under the severe northern conditions. Now the specialists of "Lengidroproyekt" have begun exploratory work in the section of the future Nizhne-Adycha GES. The Adycha is a tributary of the Yana River. On the map they are located between Lena and Kolyma, beyond the Polar Circle. It is interesting that the question of building a hydroelectric power plant on the Adycha was raised for the first time soon after the discovery in 1937 of tinbearing areas in the polar region. The hydroelectric power plant section, there are three variants of it, will be several kilometers from the mouth, in a narrow valley. The dam will be 100 meters high and about 2 kilometers long along the crest, and in the manmade sea the volume of water will reach about 100 cubic kilometers. [Text] [Moscow IZVESTIYA in Russian 17 Apr 80 p 1] 9035

GENERATOR COMPLETION--The production of the last and eighth generator for Dneproges-2 has been completed at the Khar'kov plant "Elektrotiyazhmash." [Text] [Moscow EKONOMICHESKAYA GAZETA in Russian No 12, Mar 80, p 3] 9035

ARMENIAN AES--(TASS)--Construction has been completed on the Armenian nuclear electric power station: the second energy unit with output of 410,000 kilowatts was put into operation. The creation of the Armenian AES is an important international contribution of the many union republics, kraya and oblasts of our motherland to the further rise in productive forces of Armenia and other Transcaucasian republics, and improvement in the structure of the fuel and energy balance of the southern regions in the country. All the participants in the AES construction were congratulated by L. I. Brezhnev for the great labor victory. [Text] [Moscow EKONOMICHESKAYA GAZETA in Russian No 10, Mar 80 p 3] 9035

SEWAGE PIPE--Simeiz-Moscow--A 3-kilometer branch of the deep-sea waste water outlet lay on the bottom of the Black Sea near Simeiz. Pipes 920 millimeters in diameter had been assembled by the specialists of the eighth expedition team "Podvodrechstroy" on the shore in section lengths, and the tugboat accompanied by floating cranes towed it into the sea. Water ballast was pumped into the pipe, and the "length" held up by crane cables was lowered to 90 meters, where divers waited for it under the command of the famous Nikolay Fedorovich Goncharov who has dived in many seas and large rivers. The divers joined the section to the pipeline segment that was previously laid in the underwater trench. The treatment plants under construction on the Crimean shores will soon obtain a reliable multi-kilometric outlet into the sea. "Our divers and assemblers work everywhere!" says the head of "Podvodrechstroy" S. Kladko. "For example, they built the water intake--dispersal outlet for KamAZ, the deep sea sewage outlet in Magadan, and they are erecting ship-raising structures in Blagoveshchensk, Tobol'sk and Belogorodsk; they are helping the builders of the main oil and gas pipelines. Now we are going to start on the dams of the Moscow River water system. In the capital itself, that is preparing for the Olympic Games, work is underway on the moorages along the Moscow Canal. It remains to lay on the bottom of the Moscow River an enormous heat-carrying inverted siphon-tunnel, that will connect the TETs on the Berezhkovskiy embankment with the Olympics press center (this operation will begin in the middle of May). [Text] [Moscow NEDELYA in Russian No 17, 1980 p 6] 9035

NOVOVORONEZH AES--As was already reported in STROITEL'NAYA GAZETA at the 50th Anniversary of the USSR Novovoronezh AES the fifth power unit with output of a million kilowatts has physically started up. This is a great labor victory of the scientists, power engineers, collective of the construction administration of the Novovoronezh AES, and subdivisions of Elektrosentr-montazh, Tsentrenergomontazh and Soyuzenergozashchita. Advanced methods of construction and new efficient materials were widely used in the construction of the new facility. The protective shell of the reactor section was erected with the use of a sliding concrete form, which permitted a one-third reduction in the period of its construction as compared to the traditional methods of concreting. The auxiliary facilities of the complex were installed with the use of reinforced blocks and reinforced panels. The power start-up will soon be made at the aggregate. The output of the plant will reach 2.5 million kilowatts. With a slight increase in the dimensions

of the fifth reactor housing as compared to the fourth, its energy yield will be two plus times higher. In the future these reactors will be widely used at other nuclear power plants. The collectives of builders and assemblers are now going to a new construction site; they will build the Voronezh nuclear heat supply plant. It will replace over 400 boiler houses, and will provide the city with hot water and heat. [Text] [Moscow STROITEL'NAYA GAZETA in Russian 4 Mar 80 p 2] 9035

EXIBASTUZ GRES--Ekibastuz--The Ekibastuz GRES-1 increases the energy potential of the eastern regions of the country. In its turbine hall, from which the enterprises of the Urals already receive electricity, the last section of the turbine unit for the second power unit with output of 500,000 kilowatts has been laid on the foundation. The assemblers began the final stage of assembly a week ahead of schedule. After coming to the Ekibastuz construction site they used a new form of assembly organization. The majority of assemblies and parts that previously were assembled directly on the foundations, began to be delivered in enlarged, ready units. This considerably reduced the work schedules. [Excerpt] [Moscow SEL'SKAYA ZHIZN' in Russian 11 May 80 p 1] 9035

COMPLETED FACILITIES -- The LEP-500 [the 500 (kilovolt?) electrical transmission line] from Zeya to Svobodnyy has been put into industrial operation. It is the first transmission line of such power in the Far East. The fifth 200,000 kilowatt generating unit has been placed in operation at the Maryyskaya GRES imeni 50-Years of the USSR. With its start up, the power of the station reached the one million kilowatt mark. [Text] [Moscow EKONOMICHESKAYA GAZETA in Russian No 2, Jan 80 p 3] 9136

PUMPED-STORAGE FACILITY -- Leningrad, A. Alyushinskiy -- In the near future on the Shapshe river in the Lodeynopol'skiy rayon of the Leningrad oblast, one of the largest pumped-storage hydroelectric stations [GAES] in the country will appear. The technical and economic basis developed for the construction of this unique station was approved by the Leningrad department of Gidroproyekt [the All-Union, Order of Lenin, Planning, Surveying and Scientific Research Institute imeni S. Ya. Zhuka]. "The advantages of a GAES are that it can, almost instantaneously - after a few seconds - be automatically turned on or off depending on the demand for electric power" says the deputy chief engineer of the institute, A. Vasil'yev. "Consequently, it will meet easily and quickly the so-called peak loadings when the consumption of electric power increases a great deal especially in the morning daily and sometimes in the evening hours. But at night, when the equipment at plants is stopped, city transportation is discontinued, and television screens and lights in houses are extinguished, the station will begin to accumulate energy. Pumps will begin to deliver water from the lower basin to the upper one, and, when the consumption of energy rises, the water will again be directed to the turbines through pipes." The power of the station is to be 1,360,000 kilowatts. Eight generating units are scheduled to be installed. The turbine builders of the Leningrad Metal Plant association already have set about investigations for the development of a series of new, reliable, highly efficient machines. At the site of the future construction, numerous parties of surveyors are working. [Text] [Moscow IZVESTIYA in Russian 6 May 80 p 2] 9136

POWER FOR CONSTRUCTION -- Irkutsk, special correspondent L. Kapelyushnyy--
Hundreds of kilometers down the Angara from Ust'-Ilimsk is the village of
Khodinskaya Zaimka, which was unknown until recently. There, preparatory
work for the construction of a new hydroelectric station on the Angara
cascade, the Boguchanskaya GES, is being done. Several days ago, personnel
of Elektroset'stroy [the Electric Power-Supply Construction] administra-
tion and of the special administration of Bratskgesstroy [Bratsk Hydroelec-
tric Construction] completed construction of the LEP-220 [the 220 (kilo-
volt?) electrical transmission line] from Bratsk to Boguchany. The total
length of the electrical trunk line is 326 kilometers. The power bridge
will make it possible to expand work on the production base and the dam of
the Boguchanskaya GES. [Text] [Moscow IZVESTIYA in Russian 1 May 80 p 1]
9136

CSO: 1822

FUELS

UDC 621.643/553.002.2+331.876.4

SOCIALIST PLEDGES OF MINISTRY OF CONSTRUCTION FOR OIL, GAS INDUSTRY

Moscow STROITEL'STVO TRUBOPROVODOV in Russian No 4, Apr 80 pp 8-9

[Article: "Socialist Pledges of the Collectives of Organizations and Enterprises of the Ministry of Construction for Oil and Gas Industry Enterprises for 1980"]

[Text] Collectives of the organizations and enterprises of the Ministry of Construction for Oil and Gas Industry Enterprises, implementing the decisions of the 25th CPSU Congress, made a significant contribution to development of the country's fuel and energy base. By increasing production efficiency and labor productivity during four years of the 10th Five-Year Plan, the volume of contract work was increased by 40 percent compared to the corresponding period of the last five-year plan, including an increase of 2.6-fold in Western Siberia.

Further development of the country's pipeline transport was provided. A total of 40,000 kilometers of trunk pipelines and 253 compressor and pumping stations were constructed. The Soyuz, Urengoy-Punga-Ukhta-Torzhok, the northern regions of Tyumenskaya Oblast-Center, the Urengoy-Punga-Pern'-Gor'ky-Moscow and the Dombrovka-Orenburg gas transport systems and also the Ust'-Balyk-Ufa-Kurgan-Al'met'yevsk and Nizhnevartovsk-Kuybyshev-Novorossiysk oil pipelines were brought up to design capacity.

Problems of increasing the capacities of oil and gas producing enterprises are being solved. New oil fields in Western Siberia and Kazakhstan, the Volga area and the Komi ASSR have been developed, the design productivity of the Medvezh'ye and Orenburg gas fields has been reached and the Urengoy field is being developed at advanced rates. Complex oil preparation installations with capacity of 150 million tons of oil and 138 billion m³ of gas annually have been erected. Gas refining plants with total capacity of 15.5 billion m³ annually, including 11 billion m³ in 1979, have been constructed.

The builders of the sector have erected a number of enterprises for the automotive, light, food and other sectors of industry and have fulfilled the tasks for agriculture.

The second unit of the Urengoy-Chelyabinsk trunk gas pipeline and the Surgut-Perm' oil pipeline were constructed with a significant reduction of the normal deadlines in 1979, which made it possible to ensure planned oil and gas production and transportation from the fields of Tyumanskaya Oblast.

Leading development of the gas industry capacities contributed to production of more than 400 billion m³ of gas in the country in 1979.

General Secretary of the CPSU Central Committee, Chairman of the Presidium of the USSR Supreme Soviet Comrade L. I. Brezhnev congratulated the collectives of the enterprises and organizations of the gas industry and the construction and installation organizations of Minneftegazstroy (Ministry of Construction for Oil and Gas Industry Enterprises) on this labor victory. The workers of the sector accepted the high marks of their activity with deep gratitude, given in the greeting of Comrade L. I. Brezhnev, and consider it as a new manifestation of the party and government's concerns about the builders.

Unanimously approving and warmly supporting the peace-loving domestic and foreign policy of the party and the Soviet government and being guided by the decisions of the November (1979) Plenary Session of the CPSU Central Committee and the instructions of Comrade L. I. Brezhnev in his speech at the Plenary Session and by the decree of the CPSU Central Committee "On the 110th anniversary of Vladimir Il'ich Lenin's birth," the collectives of the organizations and enterprises of the Ministry of Construction for Oil and Gas Industry Enterprises have adopted the following socialist pledges for 1980.

Ensure further increase of work efficiency and quality, wide introduction of the advances of scientific and technical progress and leading methods of work into production and timely turnover of facilities provided by the national economic plan.

Fulfill the five-year plan of contract work, including the mission for Western Siberia ahead of schedule--by the 63rd anniversary of the Great October Socialist Revolution and to ensure an increase of their volumes by 36 percent throughout the sector compared to the level achieved during the Ninth Five-Year Plan, including a 2.3-fold increase throughout Western Siberia.

Increase labor productivity in construction by 0.1 percent during the five-year plan compared to the established task.

Create the possibility for achieving gas production of 435 billion m³ in 1980 in the gas industry, established by decisions of the 25th CPSU Congress. Provide introduction of capacities at gas fields into operation ahead of schedule, primarily at the Urengoy field.

Construct installations for complex preparation of 42 billion m³ of gas in 1980.

Develop the Urengoy-Chelyabinsk-Petrovsk-Novoposkov gas pipeline system to design capacity.

Ensure leading rates of construction of the Urengoy-Gryazovets gas pipeline and put individual sections of it into operation ahead of schedule in 1980.

Accelerate work to bring the Nizhnevartovsk-Kuzbass and Shebelinka-Dnepropetrovsk-Izmail-Odessa gas pipelines up to design productivity and develop the Trans-Caucasian system.

Complete construction of the Shurgan-Syrdar'inskaya GRES and of facilities in the gas fields of the Uzbek SSR ahead of established deadlines. Organize preparatory work for development of the Dauletabad gas field in the Turkmen' SSR and construction of the Dauletabad-Mozdok gas pipeline.

Develop and begin exploitation of four new oil fields in Western Siberia and also ensure timely introduction of facilities at the existing oil fields into operation for a further increase of capacities in oil production and deliveries. Intensify work on development of fields in the Volga region, Permskaya Oblast, the Komi ASSR and on the Buzachi Peninsula in the Kazakh' SSR.

Put oil production and preparation capacities of 36.5 million tons into operation in 1980.

Complete construction of the line part of the Surgut-Polotsk oil pipeline ahead of schedule with step-by-step introduction of pumping stations into operation within the deadlines which ensure transport of Tyumen' oil in the planned volumes.

Put into operation the Samgori-Batumi oil pipeline on the Suram Pass-Batumi section during the third quarter of 1980, which will permit a reduction of oil shipments by rail transport in this region.

Ensure further development of pipeline transport of petroleum refining and chemical products and put into operation more than 1,000 kilometers of oil product pipelines.

Complete construction of the second unit of the Tol'yatti-Odessa ammonia pipeline, ensuring turnover of the pilot section for filling with ammonia during the first six months and of the entire pipeline during the third quarter of 1980. Accelerate construction of distributing stations on the ammonia pipeline, which will permit beginning delivery of fertilizers to agriculture during the second six months.

Complete construction of objects abroad ahead of schedule.

Develop further the problems jointly with Minnefteprom [Ministry of the Petroleum Industry] and Mingazprom [Ministry of the Gas Industry] which

ensure acceleration of the rates of scientific and technical progress in pipeline transport. Lay the experimental section on the second run of the Kiev-Western Ukraine gas pipeline to work out the technique of pipeline construction from multiwall pipes.

Continue development and introduction of new machines, machinery, equipment and efficient types of transport into production. Manufacture 75 Tyumen' swamp buggies, organize serial production of 12 new types of machines and equipment, expand the use of Sever welding complexes, weld more than 120 kilometers of pipelines with them and introduce four Styk complexes at Western Siberian construction projects.

Achieve a saving of not less than 300 million rubles, including 43 million rubles from use of inventions and innovator proposals, by implementation of measures to introduce new equipment and leading technology and to increase labor productivity.

Expand the scales of complete-block construction. Construct facilities with estimated cost of 600 million rubles using this progressive method. Increase removal of products from 1 m² of production areas and also accelerate introduction of new capacities into operation of enterprises producing articles for block construction. Bring the output of modular blocks, sections of collapsible buildings and complete roofs for pumping and compressor stations and other field facilities up to 400,000 m².

Increase the capacities of the self-production base on output of precast concrete by 210,000 m³, including by 130,000 m² for manufacture of large-panel building construction parts.

Continue to render assistance to agriculture. Put into operation the capacities at the Podbel'sk Poultry Plant. Increase the production of livestock products in secondary farms of the sector. Construct livestock-breeding buildings for 400 cattle and poultry houses for 100 tons of broilers in Tyumenskaya Oblast and swine-raising farms for 5,000 head in Tyumenskaya Oblast and the Tatar ASSR.

Assimilate the capacities of mills Nos. 3 and 4 for production of thin-walled spiral-seam pipe at the rate of 200,000 tons annually, introduced at the Al'met'yevka Pipe Plant. Support the initiative of the plant collective, which adopted a counterplan for manufacture of pipe with plant insulation for the needs of reclamation and irrigation and begin experimental operation of production lines for outside pipe insulation during the fourth quarter of 1980.

Save 2,000 tons of metal, 10,000 tons of cement, 12,000 tons of comparison fuel and 15 million kW-hr of electric power in 1980. Reduce the idle times of rail cars for freight operations by increasing the level of mechanization of loading and unloading operations.

Ensure fulfillment of the measures directed toward improving the living conditions and cultural-service facilities of workers. Construct and put into operation not less than 1.7 million m² of housing for workers employed in the oil and gas complex, including 750,000 m² in Western Siberia. Increase the system of children's preschool institutions by 10,300 seats and put into operation schools for 16,000 students, a 1,175-bed hospital, polyclinics for 1,610 visits and sanatoria-dispensaries for 200 beds for workers of the sector.

Expand the use of complete block structures to create the required cultural and service conditions for the pipeline workers. Bring the output of service block containers at the October Plant up to 50,000 m² and of mobile Pullman cars at the Volokolamsk and Bugul'minsk plants up to 3,500 in 1980.

Improve staffing of the organizations and enterprises with qualified workers, train and raise the qualifications of 57,000 workers and expand training in second occupations.

Widely introduce progressive forms of organization of labor and ensure fulfillment of not less than one-third of the volumes of construction and installation work by the brigade contract method in 1980. Achieve a significant reduction of losses and nonproductive expenditures of working time.

Widely organize a socialist competition in honor of the 110th anniversary of V. I. Lenin's birth. See that specific socialist pledges and personal creative plans directed toward fulfillment of the 1980 tasks and of the five-year plan as a whole and toward improvement of the qualitative indicators of work are adopted in each organization and enterprise and in each labor collective.

Improve the forms and increase the effectiveness of the socialist competition and disseminate the valuable initiatives of the leading collectives and production innovators. Organize a socialist competition of planning, transport, staffing and construction organizations on the "workers' relay-race" principle at all the most important starting construction projects. Develop the movement under the slogan "Work without lags and without injuries and accidents."

Universally support the call of the collectives of Glavsibtruboprovodstroy [Main Administration for Pipeline Construction in the Siberian Area], Glavtruboprovodstroy [Main Administration for Pipeline Construction] and the Soyuzgazpromstroy Association and of the leading brigades headed by B. P. Diduk, M. I. Buyanov, T. A. Yagolovich, Yu. I. Kil'dyushov and V. K. Shcherbakov on worthy celebration of Lenin's anniversary.

Put into operation the Urengoy-Vyngapur (II), Urengoy-Nadym (II) and the Nadym-Punga gas pipelines with total length of more than 700 kilometers and the 93-kilometer section of the Punga-Ukhta gas pipeline by V. I. Lenin's birthday, having reduced the planned construction deadlines by

2-5 months. Complete construction of seven compressor stations in the Urengoy-Chelyabinsk-Petrovsk-Novopskov gas pipeline system.

Intensify ideological work among the collectives, directing it toward a further increase of labor and political activity of the workers of the sector, consolidation of discipline and responsibility for entrusted matters and improvement of ideological-political, labor and moral education of the workers.

The builders of the enterprises of the oil and gas industry, inspired by the high evaluation of their labor by Comrade L. I. Brezhnev, assure the Leninist Central Committee of the party and the Soviet government that they will apply every effort, all energy, knowledge and experience toward successful fulfillment of the tasks on development of the country's fuel and energy base and will make their own contribution to successful completion of the tasks of the 10th Five-Year Plan and will celebrate the 26th Communist Party Congress with new labor achievements.

The socialist pledges were discussed and adopted among the collectives of workers of the organizations and enterprises and were approved by the board of the Ministry of Construction for Oil and Gas Industry Enterprises and by the Presidium of the Central Trade-Union Committee of Oil and Gas Industry Workers.

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PLANS FOR PETROLEUM, GAS INDUSTRY REVIEWED

Moscow STROITEL'STVO TRUDOPROVODOV in Russian No 4, Apr 80 pp 1-7

[Article by B. Ye. Shcherbina, Minister of Construction of Oil and Gas Industry Enterprises of the USSR]

[Text] On 22 April 1980 the Soviet people and all progressive mankind will celebrate the 110th anniversary of the birth of a giant of scientific thought and a truly national leader, a fiery revolutionary and founder of the Communist Party and the world's first socialist state Vladimir Il'ich Lenin. The brilliant theoretician and the greatest strategist and tactician of the world proletariat V. I. Lenin possessed to perfection the art of managing the revolutionary struggle and founding of communism.

The important mission of preparing and heading history's first victorious socialist revolution and of combining the theory of scientific socialism with the widest practice of the peoples' masses fell to the lot of V. I. Lenin and the party.

Leninism became the symbol of social change in the world and the revolutionary banner of our era for millions of oppressed and exploited and all workers. The permanent significance of this unified, whole, continuously developing study consists in that it deeply and accurately reflects the interests of the working class, of all workers and the needs of universal social progress, permits elaboration of the correct responses to the most vital and fundamental problems of modern times, teaches daring and creative solution to problems whose time has come and arms us with a scientific understanding of the prospects for social development.

Proceeding on the path indicated by V. I. Lenin, the Soviet people under the supervision of the Communist Party upheld the gains of the October Revolution against internal and external enemies, successfully implemented socialist industrialization of the country, collectivization of agriculture and the cultural revolution and gave the entire world a model for an equitable solution to the national problem. Our motherland was transformed to a mighty socialist power within the shortest deadlines.

The victory of the Soviet people during World War II, the 35th anniversary of which is noted this year, had a revolutionizing effect on the fate of all mankind. The national educational movement will be expanded and will grow. Many young countries, aspiring to eliminate backwardness, to achieve economic independence and to build an equitable society, are turning to Marxism-Leninism and to the experience of real socialism.

Our party is unwaveringly guided in foreign policy by Leninist principles of proletarian and socialist internationalism and peaceful coexistence. The peace program advanced by the CPSU corresponds to the most vital interests of the world's peoples.

The main source of all our victories is the indestructible unity of the party and people. The Soviet people unanimously support the internal and foreign policy of the Leninist party and the Soviet government. The elections to the Supreme Soviets of the union and autonomous republics and to the local Soviets of Working Peoples Deputies, held in the country, the speech of General Secretary of the CPSU Central Committee, Chairman of the Presidium of the Supreme Soviet of the USSR, Comrade L. I. Brezhnev to the constituency of the Bauman okrug of Moscow and the victory of the block of communists and non-party candidates in these elections again demonstrated the monolithic unity and solidarity of the multinational Soviet people before the entire world, its resolve to repulse any intrigues of our enemies, the forces of imperialism and reactionary forces and the shameless course of the cold war and antisovietism and to strengthen with selfless labor the economic and defensive might of the fatherland--a country building communism on the Leninist principle.

As pointed out in the decree of the CPSU Central Committee "On the 110th anniversary of Vladimir Il'ich Lenin's birth," the repository of Marxism-Leninism has been supplemented during the past few years by study of the development of socialism and of the methods of building communism.

Based on extensive Marxist-Leninist analysis, the party has worked out an economic strategy which meets the needs of developed socialism, the higher purpose of which is a continuous rise of the material and cultural level of the life of the people. It advanced the position of the need to combine the achievements of the scientific and technical revolution with the advantages of the socialist system of management and opened paths to create the material and technical base of communism, conversion to intensive methods of management and of increasing production efficiency and work quality.

The course of history and the greatest changes which fundamentally altered the face of the modern world provide newer and newer proof of the validity and indestructible force of Lenin's ideas.

The life and activity of our great leader and teacher are permanently printed in the history of mankind.

The young country of Soviets was faced from the first days after the victory of the Great October Socialist Revolution with urgent problems of organization and acceleration of fuel production and transport. The head of the world's first state of workers and peasants devoted a great deal of attention to fuel and energy problems in his vast and multifaceted activity.

The engraved lines of the historical document--the Decree of the Soviet of People's Commissars "On nationalization of the petroleum industry," signed by V. I. Lenin, proclaimed that oil-producing, petroleum refining and petroleum-trading enterprises and subsidiary drilling and transport enterprises (tanks, petroleum pipelines, oil depots, docks, pier facilities and so on) with all their movable and fixed property, regardless of where it is located and regardless of what it includes, are state property.

The power of the workers and peasants assumed heroic efforts to supply many factories and plants put out of operation during the civil war with fuel and to organize traffic on the railroads. The successes of the Red Army were of decisive significance. As early as 1920, on 5 January, an urgent telegram from M. V. Frunze arrived at the Kremlin addressed to Vladimir Il'ich. It contained a report on the total elimination of the Urals front and capture of the "last enemy base--that of Gur'yev." This was an important military victory. It opened the way to localize the fuel crisis in the country by liberation of the Embinskiy oil-bearing region.

On 17 March 1920, V. I. Lenin signed the decree of the Soviet of Workers and Peasants defense "On construction of a petroleum pipeline from the Embinskiy oil-bearing region to Saratov." This date can be regarded as the birthday of Soviet pipeline construction.

The Leninist style of management and the scope and efficiency inherent to it were manifested with special force in solving the problems of constructing the Aleksandrov Gay-Bmba (Algamba) oil pipeline. They serve as a remarkable example even today to all major and minor managers of construction projects of pipeline transport.

Algamba, development of the Ukhta petroleum region and the pipelines from Dagestan, Checheno-Ingushetiya and Azerbaijan--all these construction projects are related to the name of Vladimir Il'ich Lenin. And they began to be implemented with his direct participation.

Giving a speech at the 20th Congress of the RKP(b) [Russian Communist Party (of Bolsheviks)], the great leader of the proletarian revolution said: "Have you read in the newspapers about the Baku-Tiflis oil pipeline that has been opened? You will soon read about the same oil pipeline to Batumi. This will provide access to the world market. It reduces to improving our economic situation, of intensifying technical equipping of our republic, and of increasing the number of products and number of food and consumer objects."*

* V. I. Lenin, "Polnoye sobraniye sochineniye" [Complete Works], Vol 43, pp 121-122.

Lenin's plans were implemented. Oil pipelines and product pipelines were constructed to Batumi, Moscow and Leningrad received oil from Petrovsk (Makhachkala) and natural gas from Stavropol' and Tuapse and the Donbass received gas and oil from Groznyy. More than 3,000 kilometers of underground steel mainlines were laid during the years of the first five-year plans in the Soviet Union alone.

Pipeline construction was improved and its volumes were increased from five-year plan to five-year plan. More than 3,000 kilometers of major pipelines and branches from them were laid in the country during the period 1946-1950. More than 8,000 kilometers of pipelines were constructed during the Fifth Five-Year Plan (1951-1955). Following the Saratov-Moscow gas pipeline, the Dashava-Kiev-Bryansk-Moscow, the Kokhtla-Yarve-Leningrad, the Minnibayevo-Kazan', the Stavropol'-Moscow and the Serpukhov-Leningrad gas pipelines became operational.

Formation of our country's fuel complex is proceeding with regard to the presence of significant reserves of all types of mineral raw material, development of new energy sources, primarily nuclear and more extensive use of geothermal heat, solar, tide and other types of energy and economical and careful consumption of it.

Each stage in development of the country's national economy places its own requirements on the fuel balance and forms priorities in the list of fuel carriers. One of the most complex and crucial tasks is construction of oil and gas production enterprises and to provide reliable transport of these types of fuels. The rates of development of the fields should annually guarantee high increases of oil production and the fields which become operational should make up the reduced levels of production where regions have entered the second period of exploitation. The gas industry is being developed with even higher increases.

Implementation of these plans is complicated by the fact that the center of mineral resource production has shifted to Western Siberia to zones with extreme natural climatic conditions, high marshiness of areas and the seasonal difficulties of conducting work.

In March of this year, Soviet pipeline construction passed the 60th year of its history.

From the very beginning a course was taken toward formation of interrelated unified underground pipeline systems, construction of pipelines from large-diameter pipes designed for high pressure, expansion of the sphere of the economical use of pipelines and introduction of the technology and organization of construction at accelerated rates.

Of important significance in development of pipeline and field construction was separation of it into an independent sector. The Ministry of Construction of Oil and Gas Industry Enterprises, created at the initiative of the

CPSU Central Committee, became the world's largest pipeline construction organization in which significant material and technical resources are concentrated and the annual volume of contract work approaches four billion rubles.

Implementing Lenin's precepts and plans, Soviet workers and specialists created large fuel-transport systems. More than 80,000 kilometers of oil and gas pipelines were laid and turned over for operation during the past years of the 9th and 10th Five-Year Plans. Construction of multipipe gas pipeline systems from Central Asia and from northern Western Siberia to Ukhta, Torzhok, Minsk, Ivatsevichi and Dolina with total length of more than 11,000 kilometers and construction of the first unit of the Urengoy-Chelyabinsk gas pipeline were completed. The second unit was turned over for operation, which was then continued to the region of Kuybyshev and further west.

A number of other field and transport facilities has been put into operation. The Surgut-Polotsk oil pipeline was laid to Perm; in June of 1979 and to Gor'ky in February of 1980. New facilities on the Mangyshlak Peninsula in Kazakhstan, including the oil pipeline to Shevchenko, were turned over to the customer ahead of schedule.

The first unit of the Tel'yatti-Odessa ammonia pipeline 814 kilometers long was constructed and turned over to operation for the chemical industry. This is an automated system unique in engineering solutions for liquid ammonia transport.

Construction of the Soyuz gas transport system through the joint efforts of CEMA member countries received high marks of the party and government.

The volume of construction and installation work throughout the sector as a whole increased 1.4-fold during four years of the 10th Five-Year Plan compared to the corresponding period of the past five-year plan and increased 2.6-fold in Western Siberia. The number of erected compressor and pumping stations increased by almost the same amount. Enterprises for refining more than 15 billion m³ of gas annually were turned over for operation within four years. Capacities for collection and preparation of 138 billion m³ of natural gas and 150 million tons of oil for transport annually were created in the fields.

An important commission of the party and government was fulfilled in 1979--the Urengoy-Chelyabinsk trunk gas pipeline and the Surgut-Perm' oil pipeline were constructed and put into operation with a significant reduction of the normal deadlines.

The advanced development of the capacities of the gas industry contributed to production of more than 400 billion m³ of gas during the fourth year of the 10th Five-Year Plan and to achievement of the low level planned for the five-year plan as a whole for this indicator. The collectives of

enterprises and organizations of the gas industry and construction and installation organizations of the sector congratulated General Secretary of the CPSU Central Committee, Chairman of the Presidium of the Supreme Soviet of the USSR Comrade L. I. Brezhnev with this achievement.

The workers of the sector accepted with deep gratitude the high marks of their activity given by Comrade L. I. Brezhnev. They see in this a new manifestation of the party and government's concern about further development of the country's fuel and energy complex.

The 10th Five-Year Plan is the most important step for further development of domestic pipeline transport. It now ensures delivery of more than two-thirds of the hydrocarbon raw material produced in the country to users, surpassing the rapid growth of oil and gas production.

The greatest amount of hydrocarbon raw material is pumped through the pipeline systems of the USSR, whose length already approaches 200,000 kilometers, compared to other countries.

The long-term program now worked out for development of the sectors of the fuel and energy complex has been called upon to embody the best achievements of science and technology and to ensure solution of the entire range of energy problems. Scientific research and planning institutes and the design organizations of the fuel and construction sectors have carried out a number of important fundamental research and developments and have introduced engineering and production decisions which ensure stability of the rates of construction and an increase of the operational reliability of systems.

Laying the pipelines for transport of oil and gas, chemical products and other types of raw materials is usually carried out by large mechanized complexes using the production-sectional method of welding and advance engineering preparation of the routes.

The scientists and specialists of the sector in close contact with other planning and design and scientific research institutions and organizations of the country are continuing to improve the equipment, technology and organization of labor in field and pipeline construction. One of the examples of this creative cooperation are the multiply pipes, developed jointly with the Institute of Electric Welding imeni O. Ye. Paton, for pipelines designed for high pressure and the electric-contact welding installation. Powerful modern machinery--rotary excavators, trench dredgers, pipe-carrying trucks, swamp buggies and other new equipment--has been created for the routes. The advances of science and technology and of leading experience permit the builders and installers to increase efficiency and work quality continuously and to work in a shock-labor manner.

In response to the party's call to celebrate the anniversary of Vladimir Il'ich Lenin's birth with new success in the struggle toward communism and to transform the final year of the 10th Five-Year plan to a year of shock

Leninist work--a socialist competition has been widely organized at all enterprises and organizations to fulfill the personal five-year plan tasks by 22 April 1980. The call of the Moscow workers--to make 19 April a Leninist communist subbotnik and to credit the funds earned during the subbotnik to the fund of the five-year plan--found the warmest support everywhere.

The slogan of shock Leninist labor advanced by the party has a deep and purely revolutionary meaning. Shock Leninist work denotes the need to manifest with the greatest completeness in our everyday affairs those qualities of the builder of a new society which V. I. Lenin formulated in his papers "Routine problems of Soviet power," "How to organize a competition," "The great call" and other papers which determine the paths of development of socialism. He foresaw that the rush toward the light and initiative of the workers and peasants, supported and developed by the party, inevitably impart to the working man such qualities as a deep understanding of general national problems and interests, conscientiousness, discipline and the skill to work with the greatest intensity and organization.

All this is clearly confirmed in the activities of the leaders.

According to the results of the All-Union Socialist competition to increase production efficiency and work quality and for successful fulfillment of the economic and social development plan for 1979, the collectives of the Young Komsomol trusts of Severgazstroy (expansion unknown) and Tyumengazmontazh (expansion unknown) trusts, the Samotlorneftepromstroy (expansion unknown), Gazmontazavtomatika (expansion unknown), Priob'truboprovodstroy (Administration for Pipeline Construction in the Ob' Area), Promstroymateri-aly (expansion unknown) and Surguttruboprovodstroy (Surgut Trust for Pipeline Construction) and the experimental construction-installation association Sibkomplektmontazh were recognized as winners and were awarded the challenge Red Banners of Labor of the CPSU Central Committee, the USSR Council of Ministers, the All-Union Central Trade Union Committee and the Central Committee of the Young Komsomols with entry on the All-Union Board of Honor at VDNKh of the USSR. The collectives of the Turkmenneftestroy Trust and the Chelyabinsk Repair-Machine Plant were awarded the challenge Red Banners of Labor of the CPSU Central Committee, the USSR Council of Ministers, the All-Union Central Trade-Union Committee and the Central Committee of the Young Komsomols.

The collective of Glabsibtruboprovodstroy [Main Administration for Pipeline Construction in Siberia] successfully fulfilled the socialist pledges adopted for 1979. The plan of construction and installation work of four years of the five-year plan was completed ahead of schedule, on 15 October, having assimilated two billion rubles of capital investments. During this time 6,900 kilometers of oil and gas pipelines and 22 compressor and oil-pumping stations were put into operation. The Siberian workers connected 23 oil and gas fields to the pipeline systems, including 16 considerably ahead of the established deadlines.

In celebrating Lenin's anniversary, the workers, engineering and technical personnel and employees of Glavsibtruboprovodstroy have adopted new socialist pledges: to complete the five-year plan in the volume of construction and installation work and the main technical and economic indicators by 7 November 1980, to connect two new oil fields to the existing pipelines ahead of the deadlines and to mark the 110th anniversary of V. I. Lenin's birth with putting into operation ahead of schedule the pilot sections of the first unit of the Urengoy-Chelyabinsk-Petrovsk-Novopskov and the Urengoy-Gryazovets pipelines with total length of 730 kilometers.

The collective of Glavsibtruboprovodstroy has appealed to all organizations of the sector with a call to widely organize a socialist competition to fulfill the 1980 plans and of the five-year plan as a whole ahead of schedule.

This initiative has found wide support among the subdivisions of Glavtruboprovodstroy (Main Administration for Pipeline Construction), Glavvostoktruboprovodstroy (Main Administration for Pipeline Construction in the Eastern Regions), Glavyuzhtruboprovodstroy (Main Administration for Pipeline Construction in the Southern Regions), the Soyuzgazpromstroy Association (expansion unknown) and other subdivisions of the ministry.

Participating in the All-Union socialist competition in honor of the 110th anniversary of V. I. Lenin's birth, the collectives of the organizations and enterprises of Minneftegazstroy have pledged to fulfill the five-year plan of contract work ahead of schedule and to complete the task throughout Western Siberia by the 63rd anniversary of the Great October Socialist Revolution.

The socialist competition constantly generates new beginnings and contributes to achievement of the highest labor successes.

Winners of the State Prize of the USSR, brigade leader of the welding-installation brigade B. P. Diduk, brigade leader of fitters-installers Yu. I. Kil'dyushov and many other innovators are seeking more improved work techniques and more efficient organization of labor. Brigade leader B. P. Diduk, for example, and chief of the insulation column T. A. Yagolovich established a record for the run in 1979: they turned over 100 kilometers of pipeline each with high quality within three months. The board of the ministry, listening to the report of the innovators at its meeting, gave a high mark to this achievement and recommended that their experience be more widely distributed and persistently introduced in all pipeline construction organizations.

B. P. Diduk's brigade pledged to weld the 125-kilometer gas pipeline one month ahead of the established deadline in 1980--by 5 April, dedicating this achievement to Lenin's anniversary. And the welders are true to their word in the workers' manner.

The welding-installation brigades of A. G. Stolbovyy, V. V. Semenchuk and R. P. Ziyatdinov are closely approaching the position of the leaders.

Hero of Socialist Labor, excavator-operator N. A. Tyunin has completed nine annual norms, having prepared 500 kilometers of trenches for laying trunk pipelines.

Brigade leaders A. D. Pivovarov from the Nadyngazpromstroy Trust and A. F. Shevkoplyas from the Sibkomplektmontazh Association were awarded prizes of the USSR Council of Ministers for innovator contribution to construction of the installations for complex gas preparation at the Medvezh'ye field.

The best young builders S. I. Dolmatov, N. M. Lebedev, V. N. Salamatin, V. P. Chekanov and V. M. Shavilov were awarded Young Komsomol prizes.

One of the first to cope with their five-year tasks were the leading brigades of the Young Komsomol Tyumengazmontazh Trust. Among them are the brigade of sanitary engineer-fitters, winner of the State Prize of the USSR I. S. Maslov and the brigades of sanitary engineer-fitters G. F. Nagornyyak and N. N. Nechipuruk.

The brigade contract is achieving further distribution at construction projects of the oil and gas industry. Contract brigades now perform 26 percent of the total volume of construction and installation work through their own efforts and high quality of this construction is provided. Since early 1979 these brigades have achieved a saving of more than 15 million rubles compared to the calculated cost. But there is still much to be done here. The brigade contract and the flow contract should become the main system in organization of construction.

The brigade contract is the most important factor for increasing the efficiency, quality and reliability of construction of oil and gas facilities. The party's course to strengthen economic methods of managing the national economy, to develop democratic beginnings in production management and to enhance the creative initiative of labor collectives is clearly manifested in wide distribution of it.

The new form of local cost accounting should be universally developed on the basis of careful engineering preparation of production, improvement of management of production and improvement of material support and equipping of facilities.

The 110th anniversary of V. I. Lenin's birth is noted in the situation of the enormous political and labor enthusiasm of the Soviet people. Implementation of the decisions of the 25th Party Congress and of the subsequent Plenary Sessions of the CPSU Central Committee is the main theme by which the country is now living and in which our party and people are concentrating their efforts.

The decisions of the November (1979) Plenary Session of the CPSU Central Committee are program in nature and are of determining significance in the policy, economics and fulfillment of social problems.

Thorough analysis of development of the national economy was given in Comrade L. I. Brezhnev's speech at the Plenary Session and methods of implementing the decisions of the 25th CPSU Congress were indicated. The main trends and sections of work which require the greatest concentration of the party and people's efforts were determined. Special attention was devoted to acceleration of scientific and technical progress and to increasing production efficiency and work quality.

Problems of the style and methods of organizational and political-educational work, the responsibility of personnel for entrusted matters and improvement of planning and management of the economy were postulated in principle according to Leninists' ideas.

In talking about the prospects for solving future problems, L. I. Brezhnev pointed out the need for surpassing growth of pipeline transport. Attention was turned toward the need for a more decisive increase of the rates of gas production, especially in Western Siberia, and for development of future energy programs.

Successful implementation of the decisions of the Plenary Session of the CPSU Central Committee means more complete use of available capacities, raising the labor activity of production collectives and directing it toward fulfillment of the current year's plans and of the five-year plan as a whole and of increasing efficiency and quality.

Complex and crucial problems must be solved during the final year of the 10th Five-Year Plan by all collectives involved in construction of fuel energy facilities. Thousands of new kilometers of pipelines and tens of compressor and pumping stations, oil tanks, cable and radio relay communications lines and a number of production capacities in the fields, plants and factories should be put into operation. Among the most important construction projects are the compressor stations on the Urengoy-Chelyabinsk-Petrovsk-Novopskov gas pipeline, pumping stations, the Urengoy-Nadym-Punga-Ukhta-Gryazovets gas pipeline of 1,420-mm diameter pipe with development of this system to the Moscow ring, Torzhok and further to Minsk-Ivatsevichi. Among the large new construction projects are the installations for complex preparation of gas at the Urengoy field with total capacity of 30 billion m^3 , the oil pipeline on the Gor'ky-Polotsk section, completion of laying the ammonia pipeline, development of the Transcaucasian systems and so on.

Along with putting a number of new oil and gas fields into operation, an expanded program of social-cultural and service construction and development of the infrastructure in the exploited regions must be implemented.

The main directions in solving the problems for 1980 and of the five-year plan as a whole is a constant search and introduction of new progressive technical solutions which ensure an increase of the effectiveness of capital investments, the operational reliability of facilities and bringing them to design capacity in the fastest manner.

"During the 1970s we began converting our entire economy toward intensive development, toward an increase of efficiency and quality and toward emphasis on the final results of economic activity," noted Comrade L. I. Brezhnev in his speech to the constituency of the Bauman Okrug of Moscow on 22 February 1980. "We are obligated to continue and complete this most important matter which is the pivot of the party's economic strategy, in the 1980s."

The main indicator of efficiency is manifested in the final analysis in the rates of constructing the pipelines and other facilities. All our activity should be universally subordinated to this purposeful and main task.

It is important to concentrate and guarantee introduction of the most important starting construction projects within the established deadlines, regardless of variable working and weather conditions.

The struggle to increase efficiency requires further and more persistent improvement of equipment and technology. The first stage of this work has been completed in the sector. The problem of electric contact welding of large-diameter pipes has been technically solved and sufficiently high automation of this process has been achieved. The use of the new progressive method on a country-wide scale will provide an enormous advantage in labor productivity and an increase of quality in welding operations.

New powerful earth-moving machines, all-terrain transport for the northern regions, dredgers for deep dredging and other models of new equipment developed in the sector is a serious claim directed toward an increase in the efficiency of the construction process. But this is only half the matter. The duty of the scientific research, planning and design organizations is to introduce more rapidly and more widely effective innovations directly on the routes. The activity of our scientists and specialists should be better coordinated with the institutes of the USSR Academy of Sciences and of machine building ministries.

The reserves for use of more improved technology, especially that whose introduction depends mainly on improvement of organizational work, are considerable. For example, let us take the continuous-separate method of welding. It is because of this method that output in B. P. Diduk's brigade doubled compared to the average sector level. The continuous-separate method must be universally introduced. The main directions for solving the problem, including that in capital construction, were given in the instructions of L. I. Brezhnev and the decree of the CPSU Central Committee and the USSR Council of Ministers on improvement of planning and

intensification of the effect of the economic mechanism on increasing production efficiency and work quality.

Methods of implementing these instructions must be sought persistently and purposefully with regard to the specifics of the ministry and of established practice and available reserves must be found and utilized more rapidly.

The corresponding normative documents on planning, financing and crediting construction organizations under conditions of accounting for commercial construction production and on planning labor productivity and the wage fund in construction-installation organizations by net production (normative) are being worked out in the sector and a system is being created for progressive technical and economic norms and standards on types of work and labor expenditures, raw material, materials, fuel and energy resources, on the use of production capacities and specific capital investments and so on.

The relationship of the volumes and length of laying pipelines in the overall annual and future planning system is being investigated. This is being done to develop methods of accounting, organizational schemes and distribution of resources which ensure fulfillment of the sector's work plan. Development of the sector plan of work organization for the entire program is being determined in this overall topic by its importance, bearing in mind the optimum distribution of the volume of work among construction-installation organizations, effective concentration of resources at pipeline facilities and creation of efficient finishes to complete the plans of subsequent years.

The continuous planning system in pipeline construction on a sector scale is being developed. It should utilize the long-term flow system, creation of which has now begun, as a basis.

It is also planned to expand investigations of sociological problems affecting the organization and management of construction with regard to the specifics of pipeline construction, including development of the scientific basis for compilation of social development plans of pipeline organizations, improvement of the sociological basis of construction management at all levels, primarily at the primary level (foreman-brigade leader) and increasing the effectiveness of the socialist competition.

The fourth year of the 10th Five-Year Plan can be regarded as a turning point in work to improve the management structure and to reduce the level of specialization to the enterprise level. New trusts have been strengthened and created and new main administrative boards have been formulated. Our general line is to aim production toward the final result and toward a specific program of putting objects into operation and is the line for contract "under key."

Further improvement of management (even with known delays of establishing new subdivisions) permitted the sector to complete many specific tasks. Whereas the volume of work by the contract method increased during the first six months of 1979 compared to 1978, the volume of contract work began to increase from month to month when the new organizations began to effectively operate: for example, the increase was 8.7 percent in September, 11.5 percent in October and the annual increase was 7.6 percent, while it reached 10 percent in January and February of 1980. The style and methods of organizing work and labor by the new system, especially in the main production section--the local flow and brigade--should also be improved in the future.

But whereas we managed to increase the rates of work, we were unable to achieve universal and timely transfer of objects for operation. Turnover of structures in the fields and on the pipelines within the deadline should be the main concentration of all organizations and enterprises.

The unified economic interest of all construction participants should be the basis for work efficiency and for providing timely introduction of facilities into operation. The role of network schedules must be increased and the economic responsibility of executors must be increased.

And in the future one must proceed along the path of eliminating narrow specialization by types of work and training of builders and installers of wide profile. Every worker should have 2-3 construction occupations.

Work quality is closely related to high efficiency.

Demandingness toward each engineer, technician and toward each worker for quality of construction must be sharply increased and a situation of high standards and intolerance of violators of plans, construction norms and regulations must be created.

The constant factor of an increase of efficiency is efficient use of equipment and other resources. The organizations and enterprises of the sector are being supplied with ever more powerful and more expensive equipment. And not only the deadlines for introduction of objects under construction into operation but also economic indicators (which is no less important) will depend on how it is operated and used.

There are many unresolved problems in the sector. All attention should be concentrated on them. This is especially true of developing essentially new planning solutions, introduction of automation and provision of the maximum economy of live labor expenditures. For example, much can be done for total automation of control of compressor and pumping stations. This is a very timely problem and everything necessary must be done to solve it within the shortest possible deadlines.

The same errors, omissions and miscalculations are being permitted from month to month in a number of organizations and enterprises. It is time to

extract the appropriate lessons from them and to reach the correct conclusions.

Unfortunately, there are subdivisions which draw out construction of ground facilities to inexcusably long deadlines. Instead of concentration of forces and resources, the plans within the quarter of each year and even interquarter division are arbitrarily manipulated. There are interruptions in work and rush work as a result of nonuniform loading.

An absolute requirement is to carry out pipeline construction in combination with installation of electrochemical protection, communications and surface structures. However, some managers are clearly undervaluing the complex management of these operations, as a result of which shortfalls occur.

This practice must be fundamentally altered.

The interaction of sector subdivisions with subcontracting organizations must be improved. Miscalculations in coordination of their activity is a cause of significant losses and organization of construction and installation work. The way out of the established situation is to achieve complete use of the subcontracting limit.

Problems of technical re-equipping of the sector must be actively solved.

The industrial base requires further rapid development. A total of 2.2 billion rubles, i.e., 126 percent of the plan, was invested in the construction industry during four years. But unfortunately, the enterprises have still not achieved the design capacities. Capital investments in their development must be utilized economically, in a well-thought-out manner and skillfully, structural members, materials and equipment must be provided and concern must be shown about the permanent worker and specialist personnel. All plants should be brought up to design capacity in the near future, acceptable products should be produced and installation and finishing work should be carried out with high quality.

Local resources should be utilized more energetically.

Wood products and structural members can be used to construct temporary structures under northern conditions. It has been recognized as feasible to expand the construction of prefabricated wood buildings. The responsibility of the Sibzhilstroy Association to fulfill the program for erection and turning over apartment buildings for operation is especially high. Urgent measures must be implemented to reduce uncompleted construction to a minimum.

In fulfilling the decree of the CPSU Central Committee "On further improvement of ideological and political-educational work," the organizations and enterprises of the sector have increased somewhat the level of educational

work. Specific measures are being implemented at the main administrations and associations and at most trusts and future plans on communist education of workers have been developed.

However, ideological work continues to remain at a low level in some labor collectives. Regardless of how strange this seems, some managers have removed themselves from political and mass educational work. It is among this type of managers that do-nothings are encountered who promise a lot but do little. The gap between words and deeds, as is known, reduces the effectiveness of educational work but of economic activity as well.

The primary duty of a manager of any rank and category is to hold regular meetings with the members of the collectives and to manifest constant concern about the occupational and spiritual growth of people and about meeting their vital needs.

Organization and increasing the quality of political and economic training of workers and strengthening the material-technical base of ideological work requires daily attention.

Organizational, mass-political and ideological work should be constructed with respect to the national economic tasks faced by the sector. The main trends of this work are universal organization of the socialist competition, its orientation toward qualitative indicators, support and distribution of leading experience, subsequent maintenance of economic conditions and the struggle with violations of labor discipline.

The year 1980 is based on the results of the previous, fourth year of the 10th Five-Year Plan. And at the same time it is the starting year of the new, 11th Five-Year Plan. That is why, in solving the problems of the current year, the forthcoming five-year plan cannot be forgotten for a single day. Preparations must be actively made for it now. This is primarily true of the scientific and technical aspects of the matter: development and introduction of new progressive technology, design and output of highly productive machines, mechanisms and equipment; and on organization and development of work on facilities, introduction of which is planned in 1981-1982.

A decision was made at the expanded session of the board of the ministry, held in February of this year, to ensure timely implementation of measures to improve the economic mechanism and planning. Special attention was devoted to careful preparation of each construction organization and enterprise to conversion to new methods of management beginning in 1981.

Among the most important construction projects of the 11th Five-Year Plan are the multiwall gas pipeline system from Urengoy to Ivdal'-Kuybyshev-Kazan-Yelets. Work should be begun immediately on engineering preparation on these new runs. Consequently, closer relationships with the planning institutes and a joint search for optimum solutions are required.

Western Siberia is at the center of attention as before. The country's main fuel and energy base during the current five-year plan should provide practically all the increase of oil, gas condensate and natural gas production.

Being a constituent part of the fuel and energy complex, our sector can do much by participating actively in formation of its development and of finding the methods, realization of which will provide the best structures and proportions of the economy, and will make it possible to achieve a large and rapid saving at minimum expenditures. This makes it necessary to work creatively, in constant contact with customers, on selection of the most progressive routes, technologies and planning and organizational decisions. The problem is to see that the level of expertise of plans and adopted technological solutions is raised and that responsibility for acceptance of construction projects is entrusted to main administrative boards and associations and consideration of them is carried out together with the managers of trusts at which the responsibility of executors is entrusted.

Mingazprom (Ministry of the Gas Industry) and Minneftegazstroy have jointly planned the profiles of the future 11th Five-Year Plan. Significant corrections have been made in selection of the trends of the gas routes and concentration of determination of them has been identified. Together with the customer, one must work persistently to develop a new generation of pipelines for pressure of 100-120 kgf/cm² and a cooled and liquefied gas transport system. Successful solution of this most important problem will permit better fulfillment of the task of the party and government on the necessity to increase the fraction of gas in the country's fuel balance.

The complex-block method of construction, which in turn will be changed more and more, as will the nature of construction itself, continues to be improved. As indicated by calculations, the output of blocks should be significantly increased during the 11th Five-Year Plan and the program for complete-block construction should be increased.

Our duty is to strengthen the developments of new types of pipeline transport for coal, inert materials and other goods. Just as urgent is the intersector problem of delivering pipe with plant insulation to the routes. This is the most important term for growth of efficiency and quality in pipeline construction.

The entire multifaceted activity of our native communist party is full of the spirit of historical optimism and the rightness of the high duty of creating a new society. It is confidently leading the Soviet people toward a cherished goal--communism--under the Leninist banner.

The decisions of the party congresses and the theoretical and practical activity of the Central Committee and its Politburo headed by Comrade L. I. Brezhnev open the prospects for building of communism to the Soviet people, indicate the ways and means of implementing the program tasks and lay a true course which meet the aspirations of all peace-loving mankind.

Having extensively organized a socialist competition in honor of the 110th anniversary of V. I. Lenin's birth, the collectives of the sector organizations and enterprises have given the word to mark the forthcoming 26th CPSU Congress with new achievements in labor and with successful fulfillment of the tasks of the final year and of the 10th Five-Year Plan as a whole.

The scope of the labor competition and the first success on the new construction projects provide firm confidence that the pipeline builders, following the ardent appeal of the party, will transform 1980 into a year of shock Leninist work.

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FUELS

GROWTH OF USINSK IN OIL REGION DISCUSSED

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 14 May 80 p 2

[Article by special correspondents N. Goncharov, V. Krukovskiy and L. Tsvetkov, Komi ASSR: "A City is Born"]

[Text] The commander of the MI-2 helicopter Aleksandr Lamin took the craft up in the air as usual and we saw this tenacious worker's settlement of Usinsk from a bird's eye view. The surroundings, as far as the eye can see, are vast spaces of forest tundra, and the lively island of the oil workers' town in this boundless area automatically arouses respect for their courage. There are the short ladders of the airport, where the administrators of the "air taxis" with genuine enthusiasm and incredible difficulties serve more than 100,000 passengers per year; there are the first blocks of apartments alongside the ineradicable "boxes" of the portable homes of the first tunnelers; the polyclinic, the culture center for oil workers, the school of arts with departments of music and painting... But two steps later, just past the concrete structures, the land breathes heavily from its swampy belly, covered only for the winter with a steady whiteness along which rescue transport paths lie in various directions.

The city of northern oil workers is being raised in the warmest point of the future Timano-Pechora fuel-energy complex, which is being formed following a decision of the 25th CPSU Congress. Here now, at the inter-fluve of the Usa and the Pechora, there is a restless group of builders, oil workers, transport workers, drillers and geophysicists. After reinforcing their base, they will attack the northern virgin oil region.

In Usinsk there are now more than 45 enterprises. The creation of the first phase of the Usinsk industrial center is being completed by builders of the USSR Ministry of Heavy Industry Construction, the Ministry of Transport Construction, the USSR Ministry of Power, and the Ministry of Construction of Oil and Gas Industry Enterprises. It simply is not to be believed that a little more than 10 years ago here, in these almost unpopulated vast spaces, there were only a few prospecting wells. One of them produced a mighty gusher of oil. Now there are 340 wells operating on the local oil field. According to rates of increase of oil extraction

the Usinsk industrial region of the Komi ASSR is second only to Tyumen'. A very large railroad bridge has been put up across the Usa and it is an imposing sight even from the air.

The pilot makes an abrupt turn and our helicopter passes over the railroad line along which passenger trains will soon travel to Usinsk. Appearing below are the main facilities of the oil field with high-capacity silver tanks. The oil goes from them along the Usa-Ukhta-Yaroslavl' oil pipeline.

But visible from above is something else: sometimes materials are carelessly stacked at the new construction sites; lying here and there under the open sky is equipment that was delivered with great difficulty; the villages unexpectedly turn out to be almost treeless; along the whole horizon of the forest tundra there is thick smoke drifting, torches are blazing--casing head gas is burning, still heating up the northern sky. We recall automatically that the mail boxes of SOTSIALISTICHESKAYA INDUSTRIYA put into the village before the meeting between Usinsk residents and leaders of party, soviet and economic organizations came to have many acute questions bothering the workers of the petroleum North. And among them there literally was the scream of long-enduring fears: why hand in hand with labor romanticism, with businesslike sharpness is there sometimes protracted lack of organization, and at times even outright mismanagement?

With a presentiment about a frank discussion, we went to the Oil Workers' House of Culture, to which had come the secretary of the Komi Oblast Committee of the CPSU A.F. Syutkin, department heads of the party oblast committee V.P. Ivakhnenko, V.I. Yakimenko, the deputy minister of the oil industry G.S. Popov, chief of the main sector administration from the USSR Ministry of Construction of Heavy Industry Enterprises V.V. Ponomarev, the deputy chief of the main administration of the Ministry of Transport Construction Yu.V. Petrov, chief engineer of the All-Union Soyuzzapsibenergo Production Association I.A. Novozhilov, general director of the Komineft' Association A.S. Gumenyuk, the chief of Glavkomigazneftestroy V.I. Miroshnichenko, the manager of Komienargo A.G. Kirillov, chief of the Komityashstroy Association N.U. Belotserkovskiy, chief of the Komi Civil Aviation Administration N.V. Ryzhakov, chairman of the Komi oblast committee of the trade union of workers in the oil and gas industry A.N. Polukhin and other leaders of republic associations and departments, as well as of rayon organizations.

Our hopes were justified. The 450-seat auditorium was overfilled. Even those who did not have a seat did not leave until the meeting ended. There were well over a hundred questions, and many of them required detailed, sometimes impartial explanations...

Face to Face

The first secretary of the Usinsk rayon committee of the party Vladimir Artem'yevich Fagradov began his tale about the first steps of local

industry not with figures, but with the fate of people. He, the head of the rayon party organization since the day of its founding, had the not easy fortune of being with those who were the first to come to the steep banks of the Usa with an oil prospecting expedition. He knows the present participants in the meeting very well and talks about them as if he literally wants to explain to the guests why his comrades are so exacting in their questions to the representatives from the ministries and departments.

The people who have come here from all corners of the country have recognized in this territory the true worth of mutual assistance, of comradely union, of conciseness in work, and they do not accept indifference in business, no matter in what economic unit it is manifested. Take the drilling foreman from Belorussia, Svyatoslav Melekhin. He has become firm friends here with the Russian fellow Nikolay Dobryakov. They worked in the same brigade. Svyatoslav helped his comrade become a foreman. Now both brigades are the best in the Usinsk Drilling Trust, even in the sector. But recently their argument for leadership was joined by a southerner, drilling foreman from Georgia, Tengiz Andguladze.

Fagradov says that he could spend the whole evening naming distinguished working people. But this is not the whole matter. Are we working well, are we organizing leisure time correctly? And he answers himself: there is something to be desired. The planning marks in development of oil-extracting capacities have been surpassed. On the whole the extraction of oil since the start of the five-year plan is outstripping the assignment by 650,000 tons. But this unfinished matter comes to light: during the first quarter already the plan has not been met by 220,000 tons of raw material. There is a great deal of disorder in preparation of the front of operations, in the drilling of wells! Carelessness, lack of discipline have not been done away with...

Included in the discussion is the deputy minister of the oil industry, G.S. Popov, who was acquainted beforehand with the questions from the mail box. Well, at the oil fields and drillholes things are still in far from the proper order. The ministry is perturbed about this. The volumes of oil extraction have lagged behind the directive figure for $1\frac{1}{2}$ -2 years. To a large degree the Usinsk Drilling Trust is guilty of this. Last year it failed to produce 44 wells.

Voice from the audience: What about the operating fund of wells, is this known to the ministry?

G. Popov: It is known! Last year in Usinsk about 10 percent stood idle and at times even up to 15 percent. This is very many: it has been established by an order of the ministry that the inactive fund of wells should not exceed 2.4 percent of their total number. The ministry is making the leaders of the NGDU [oil and gas extracting administration] and the Komineft' Association strictly responsible for this... The shop for major and underground repair of wells in Usinsk is still operating poorly.

During the past year, for instance, there were several dozen repeat repair jobs, which cost the state hundreds of thousands of rubles.

But let us return to the Usinsk drillers. The average cutting for them is increasing slowly. Now it comes to about 8,000 meters per year per brigade, while the best drilling squads drill about 11,000-13,000 meters during the same time. The gap between the leaders and the "middle" workers, as we see, is a solid one. Moreover, it is increasing constantly. Two years ago in Usinsk there were five brigades with high productivity, but now there are four in all.

Question from the audience: Can "long-distance" management interfere with this?

G. Popov: What do you mean?

Voice from the floor: Well, that working in Usinsk are 10 brigades of the Archaginskiy Drilling Administration, and in Frolovo in Volgogradskaya Oblast there are only two. Meanwhile the ministry isn't in a hurry to transfer the management of the drilling administration to Usinsk.

G. Popov. If such a necessity arises, we will make the transfer.

It is necessary to make a digression here. This is not the first time that ministry officials are in agreement that it is not normal when almost the whole worker collective is located in one part of the country, and the leadership of it is in another part. But do not hasten to draw conclusions. The deputy minister has been required with difficulty to explain certain other inadvertences. But Gennadiy Stepanovich has not tried to cut corners. It was acknowledged, for instance, that the rates of development of the Usinsk and Vozey'sk deposits are considerably in advance of the volumes of pumping water into the beds. And this means that more and more new wells are being converted to mechanized extraction. Hence there are losses in the rates of extracting the fuel, there is a sharp increase in expenses for production, and there is additional work for the builders, who have enough in Usinsk even without this trouble.

The Usinsk people are meticulous. And it is not that often that they meet such high-level leaders. So for this reason they are not missing the opportunity of speaking with them about the most urgent matters.

The next note from the auditorium: "What is being done in order to cease pollution of our rivers, particularly the Kolva, with oil products?"

G. Popov: You know that purification facilities are already operating for industrial sewage in the installation for pretreatment of oil at the Usinsk deposit. A sewer system for the production bases has been introduced in the oil workers' settlement. Now the center of concern is being shifted to the Vozey'sk deposit and to expansion of purification facilities in Usinsk. I think that the managers of the Komineft' enterprise must increase control over the erection of these facilities.

In answering the question of when all the casing-head gas will be supplied to the Pechora GRES [state regional electric power plant], the deputy minister spoke about the sluggishness of the USSR Ministry of Power and the Ministry of the Oil Industry, about the lack of coordination in work deadlines, about technical errors, about the "hydrate plug" which caused an emergency situation. But these explanations hardly satisfied the Usinsk people.

Who Has the Keys?

Nothing came out of the trip to Usinsk by the deputy minister for construction of oil and gas industry enterprises M.Kh. Khusnutdinov, although there was such an understanding. Moreover, Marat Khayrutdinovich also became acquainted with the questions of the Usinsk people addressed to his ministry. But on the eve of the meeting in the northern settlement the deputy minister suddenly turned out to be... on leave. No one replaced him from the apparatus of the ministry. This happened, apparently, not without purpose. The assistants to the gas workers and oil workers for the construction section pretty well had to blush for their work in Usinskiy Rayon.

This is the third year that water supply facilities have been under construction at a snail's pace at the Vozneysk deposit of the Severpromstroy Trust (director, V. Sirota). For this reason the field workers daily have a shortfall of almost 5,000 tons of oil. For another facility the trust has now accepted in the plan only two million rubles of construction and installation out of the 12 million total. But even this more than humble program is not being fulfilled in the best way. Not giving cause for happiness is the state of affairs at the majority of priority facilities, because at those which are needed by the oil field workers considerably later, the trust picks up the necessary volumes "for the plan." The chief of Glavkomigasneftestroy, V. Miroshnichenko, was compelled to agree publicly:

"In fact... the plan for the volume of construction and installation jobs was fulfilled by 111 percent, but individual projects were not introduced."

Question from the floor: Please tell us when the installation for pre-treatment of oil, for which the documentation exists, will be built.

V. Miroshnichenko: Today we do not have the technical documentation in the full volume...

We tried to establish the truth. According to a reference of the Usinsk department of USSR Stroybank as of 1 September of last year the client proposed in the plan projects worth more than 5 million rubles, and documentation was lacking only for 200,000. It is doubtful that a contractor, having accepted a program for 2 million, would contrive to select all those projects for which the plans and estimates did not exist. Moreover, the client liquidated the left-over debts long before the meeting in Usinsk, and it was late to refer to them.

The true reason for the lag is because the main administration is excessively slow to increase the capacities of Severpromstroy. The forces of the trust, responsible for providing facilities for the deposits, are dispersed with the consent of that same main administration beyond the limits of Usinskiy Rayon. When the Ministry of Construction of Oil and Gas Industry enterprises will turn over to the oil workers the keys to the new industrial facilities was not heard by those in attendance.

In answer to numerous questions the chairman of the Ministry of Transport Construction Yu. Petrov said that there is the intention daily to send to Usinsk up to 30 carloads of freight along the new track. Considering last year's lag, the ministry is enlisting additionally the subdivisions of Leningrad, Belurussian and Arkhangel'sk trusts. Together with Pechorstroy and the subcontractors they should put the railroad line into operation during this year.

Question from the floor: What about the construction of the highway?

Yu. Petrov: During the year it is required to extend asphalt-coated roads by 50 kilometers. But only half of the operations is being completed: the Permiorstroy Trust does not have enough equipment.

In fact, the Tatra dump trucks allocated by the ministry have already worn out. And although oil workers provided assistance in the delivery of materials and covering slabs, the road builders still are not managing the pouring. The slabs have to be put on a just-formed bed, without having let it settle. This threatens unnecessary repairs in the future.

"In the last three years power builders did only half of what was necessary for the oil workers. When will they reach the planned level?"--this question was to the representative of the USSR Ministry of Power.

Chief engineer of Soyussapsibenergo, I. Novozhilov: The All-Union Industrial Association has been specially set up in the ministry for more reliable electric power supply to the oil and gas fields of Western Siberia, the Tatar and Komi ASSR's.

Question from the audience: Now our whole rayon is being supplied from one electric power line. What is its reliability? When will the second line from Pechora go into operation?

I. Novozhilov: In the third quarter.

The question of when Usinsk would have unified telephone communication was answered by S. Karetnikov, chairman of the rayon executive committee. Although by rights his place on the panel should have been occupied by an official of the USSR Ministry of Communications, the one which is almost the last to come to developing industrial centers. For this reason Usinsk is completely repeating the fate of Surgut, Nizhnevartovsk and other oil cities where it is hard on the nerves and takes a lot of time to make a

phone call through countless departmental switchboards. And it is fully understandable, S. Karetnikov was not able to console the Usinsk people. The rayon telephone station will appear only at the end of the next five-year plan. Isn't that late?

The "Romantic" and Romance

"We have come here not for the long ruble, but forever, in order to live and to work," an official of the Usinskstroy Trust, M. Romanova, wrote in her note. We settled in temporary towns and considered this normal, because there was no other housing. But how much time has passed! We were able, think of it, to build a whole city, but we continue ourselves to live in the same portables, without any communal conveniences. The names of our dilapidated settlements, 'Fantasy,' 'Romantic,' today do not bring forth anything but a smile..."

"The main cause of the lag in introducing housing is the inadequate capacities of our Usinskstroy Trust," the chief of one of the main administrations of the USSR Ministry of Construction of Heavy Industry Enterprises, V. Ponomarev, stereotypically made excuses to the audience.

But it is asked, who, then, besides the ministry, will see about strengthening the trust?

Children's nursery No. 19 was not turned over on time, turned over to the client with imperfections were a motor vehicle depot for 400 vehicles, apartment building No. 4 on Builders' street, and so on. The chief of the Komityashstroy Association N. Belotserkovskiy shared common words in a note on low-quality construction of an apartment buildings:

"The quality of housing in Usinsk," he said, "today really is not at the proper level. But we are witnesses that each new building still is built better than the previous one."

But in the note, meanwhile, a specific building was pointed out and the note was addressed to the director of the Usinskstroy Trust, V. Bibikov. But he kept silent.

N. Ryzhakov, chief of the Komi administration of civil aviation, spoke about shortcomings in the organization of passenger transport. Expansion of passenger transport is being held back in many ways by the poor work of the builders in the airport. And particularly at the terminal building. In the first quarter the contractor, the Pechorstroy Trust, did so-so work there. The trust's representative Zav'yalov was generally in doubt: will the construction be continued now or not...

Yu. Petrov: Set up in the Ministry of Transport Construction was a new main administration, Glavgasstroy, which is called upon to organize such operations both here, in the Komi ASSR, and in Western Siberia. But

its subdivisions still have not recruited to full capacity. This is one of the reasons why we are not turning over the airport terminal this year. But we will try, of course, jointly with the Ministry of Civil Aviation to speed up the work.

Question from the floor: It is not only a matter of the construction, but also of the organization of transport. There is a direct route from Kazan' to Usinsk. But three or four tickets are sold for the plane. Where do the rest go?

N. Ryzhakov: We will review this complaint.

Remark from the audience: Workers from Ivano-Frankovsk are forced to assemble in L'vov and only from there can they get to Usinsk.

N. Ryzhakov: The Komineft' Association has not raised this problem to us. We will consider it...

N. Ryzhakov was justly reproached: his administration cooperates poorly with other subdivisions of Aeroflot. They do not welcome here the aircraft of "alien" aviation enterprises. They do a poor job of delivering the drillers from Volgograd and other cities. Now the big craft of the "TU" type cannot fly into Usinsk: the air strip is short.

"In December 1978 the Komineft' Association addressed the Ministry of the Oil Industry regarding this problem," answered G. Popov. "Now measures are being taken in order to remodel the runway..."

But yet talks about remodeling have been going on for almost a year and a half. However even the order for planning has still not been drawn up. The Usinsk passengers will not fly far at such rates.

The Usinsk residents also gave reminders that it is time to improve bus travel in the settlement.

S. Karetnikov: The Komi motor transport administration is not limiting us to motor buses. The whole matter is in the construction of covered stops for them. The managers of the oil and gas extracting administration have assured us that these stops will be installed in August.

From the auditorium: Well, we can wait a bit. Only we do not have side walks for pedestrians. There are vehicles on the road, and it is pretty muddy...

S. Karetnikov: Now we have released about a million rubles for improvements. In the summer we will use this money, and we will try to put things in order. We will build a drainage system or storm drains. The absence of roads, side-walks, and other elements of improvements so far does not give us the right to get the status of a city for Usinsk...

The participants in the meeting expressed the desire that the rayon executive committee take a more firm position in the fight for amenities, that it not tolerate the creation of temporary settlements. Now it is not an organization, it is their town. They are holding on without an elementary plan, without providing amenities... There was a specific question to A. Gumenyuk, general director of the Kombineft' Association:

"Anatoly Stepanovich, when will the portables on Naberezhnaya street be taken down?"

A. Gumenyuk: in the next few days we will survey this housing and if necessary we will grant apartments to the people living there on a priority basis.

The future base city of the oil workers is being born before our eyes and, it can be said, will literally be torn out of the conglomeration of barracks and railroad cars which, like weeds, stifle the useful vegetation. But the future disorders are perceptible even in the two microregions already created. A whole mature forest was rooted out, and it is not easy to start planting greenery anew.

"It should be said," agrees the representative of the USSR Ministry of Construction of Heavy Industry Enterprises, V. Ponomarev, "that, apparently, it is not necessary to cut down everything. We will give our trust instructions on this account..."

Questions, questions... About fur clothing, about when construction of the hospital will be completed, about standards for overalls, where to take the children for the summer... The last was answered by the chairman of the oblast committee of the trade union for workers in the oil and gas industry, A. Polukhin:

"Everyone who wishes will be able to send their children to vacation in the south--in the Crimea, the Caucasus, the shores of the Azov Sea."

The secretary of the Komi oblast committee of the CPSU A. Syutkin reasonably remarked in conclusion that one cannot but expect from such a representative meeting beneficial changes in the development of the oil region. It is necessary only to fulfill what has been promised on time.

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WEST SIBERIAN MANAGEMENT OF OIL, GAS COMPLEX

Moscow STROITEL'STVO TRUBOPROVODOV in Russian No 4, Apr 80 pp 22-24

[Article by V. Ya. Voznyak]

[Text] Development of the West Siberian Oil and Gas Complex is now characterized by a significant increase in the volumes of capital construction and qualitative changes of the production-economic and social situation. A further increase of oil and especially of gas production is required under ever deteriorating mining and geological conditions. Not as large oil fields as previously, located in difficultly accessible regions, are entering the production cycle. Whereas approximately 40 oilfields and pools were put into operation during the past 15 years, an even greater number of fields is planned for introduction during the 11th Five-Year Plan.

The role of intensive factors of development of production is increasing and its efficiency is being enhanced by introduction of the latest advances of science and technology. More complete extraction of oil and gas from the interior must be provided, which is related to the use of forced methods of production and reconstruction and technical re-equipping of the enterprises of the oil and gas industry. Along with this, it becomes necessary for technical re-equipping of the construction organizations of Minneftegazstroy [Ministry of Construction for Oil and Gas Industry Enterprises], primarily with regard to the further accelerated development of pipeline transport, which should ensure delivery of oil and gas to the center and western part of the country.

The rates of development of the social and service infrastructure of the territorial-industrial complex must be increased sharply to improve the living conditions of the workers and their families and to stimulate formation of stable production collectives.

The real capabilities of making the entire management of the complex more efficient, closer cooperation and establishment of direct production-economic ties of the enterprises and associations of different sectors based on a unified specific program should be more fully utilized.

Gosplan of the USSR has begun development of a complex specific program for development of the West Siberian oil and gas complex for the long term. An important aspect of this program is improvement of the management structure of the complex as a whole and of its main subsystems. One of the main tasks is to overcome agency disassociation and to reduce the number of management units.

It was noted at the 25th CPSU Congress that four agency river fleets and a number of construction and supply organizations are operating in Western Siberia, essentially performing a unified task. They are all contained in tens of ministries and agencies in Moscow.

Disassociation is manifested not only in the relations between enterprises of different ministries, but even in the management structure of the same ministry. The Main (territorial) Production-Management Administration of Minneftegazstroy was formed at Tyumen', but small secondary enterprises and facilities of different main administrative boards and associations of this ministry are still being retained. Individual disproportions were noted in development of the complex and the activity of sector and territorial organizations in solving a number of economic and social problems is not being adequately coordinated.

Improvement of the organizational forms of management by formation and development of a territorial-industrial complex (TPK) and coordination of the activity of different ministries and agencies who participate in development of the productive forces of the complex are required.

Administration of a TPK has two aspects--sector and territorial. The more correct and most feasible combination of them must be found in formulation of the complex territorial plan for economic and social development of the region on the basis of a specific program for development of the TPK. Complex specific programs, being tied to the national economic plan, are a means of solving intersector, essentially new problems. The programs are realized through the national economic plans. At the same time the specific nature of the plans and the effectiveness of planning decisions depend on their program profile and valid inclusion of programs for solution of the most important national economic problems in the plans. Specific executors should be responsible for each program measure. Therefore, the system of program measures and support with resources is transformed to the corresponding tasks and commissions in which the content and volume of work, the deadlines for execution of it, the composition of the executors and the allocated resources are indicated.

A specific scientific base and special scientific research organizations, including those directly on the territory of the complex, are necessary to work out the program for development of the TPK and the general schemes for development of the region and sectors. Scientifically based recommendations which determine the main steps of TPK formation, beginning from prediction and pre-planning justifications and worker planning, and ending with putting the capacities of the complex into operation and assimilation of them, are necessary.

Special attention should be devoted to scientific support of TPK formation. A Scientific Council of the USSR Academy of Sciences on problems of developing the oil and gas complex of Western Siberia may be created which would coordinate the activity of the scientific institutions in the given region. The sector science of Minneftegazstroy should be brought closer to Western Siberia and large branches of such institutes as VNIIST [All-Union Scientific Research Institute for the Construction of Trunk Pipelines] and NIPIESUneftegazstroy [expansion unknown] should be organized there. There is a need to create bodies which would be engaged in planning the development of the TPK, which would coordinate the activity of the ministries and agencies and which would solve the inter-sector and territorial problems arising.

It was suggested that the right to manage all enterprises on the territory of the complex be transferred to the administrative bodies, but the sectors would then be entirely excluded from the management system, which cannot be condoned. It was also suggested that a coordinating body attached to Gosplan of the USSR be created. However, this body would be unable to perform administrative functions. The possibility of forming an advisory body--a permanent consultation body with recruitment of representatives of operating enterprises and those under construction and organizations located on the territory of the TPK and also local bodies or interoblast economic councils for coordination of the activity of ministries, development of territorial plans and checking of their fulfillment--was considered. We feel that this form is hardly effective.

A special body for planning administration of the TPK with direct subordination to Gosplan of the USSR, for example, a Territorial Department of Gosplan of the USSR at Tyumen', can be organized at the West Siberian Oil and Gas Complex. This body is called upon to dialectically combine the sector and territorial aspects of administration with the prevalent role of sector administration. Its main function is to work out the main rates and proportions of five-year and annual plans for economic and social development of the TPK on the basis of the long-term program for development of the complex and to coordinate the sector plans of the ministries and agencies participating in development of the complex according to these rates.

The body of planning administration of the TPK includes representatives of all sectors of specialization of the complex and of the main integrated sectors. The ministries and agencies coordinate the plans for development of their own associations (enterprises) and organizations with the territorial body and then, according to the complex program, the tasks are allocated in the national economic plan to the ministries and agencies for a given complex and resources are allocated to carry out these tasks.

The body for planning administration of the TPK receives regular information on fulfillment of plans, analyzes the noted trends, prevents possible disproportions and works out specific proposals to eliminate deficiencies

in the economic activity of the enterprises and organizations of the region. Monitoring the balancing of plans and the course of construction of new production capacities and facilities, fulfillment of their pledges by agencies in participation and construction of intersector objects and financing of them and environmental protection and also creation of the necessary conditions for the life of the population is especially important.

The planning body becomes the customer in working out the long-term general schemes and programs for development of a complex and becomes the initiator of geographic, economic, sociological, demographic and technical investigations of the problems of the complex. This body forms the initial information bank.

An economic council consisting of representatives of the main economic organizations participating in development of the complex, party and Soviet bodies, prominent scientists and workers of scientific research institutes and planning institutes may be formed in the territorial department of Gosplan of the USSR. The most timely problems for economic development of the TPK should be considered periodically and the necessary recommendations should be worked out in the council.

Creation of a planning administration body at Tyumen' would contribute to improving the coordination of the activity of the enterprises and organizations of different ministries and to solution of a number of problems related to increasing the efficiency of the complex as a whole. This form of management will achieve further development with expansion of the sector composition of the complex. Inclusion not only of fuel sectors but of electric power engineering into the complex as specialized facilities can be predicted today; oil production will be supplemented by refining and by development of petrochemistry and chemistry.

Machine building and metalworking enterprises must be developed at the TPK. Enterprises of this profile now existing in Tyumenskaya Oblast mainly produce products which do not correspond completely to the needs of the oil and gas industry and construction and a large part of these products are exported to other economic regions. At the same time the need for cold-weather versions of equipment, machines, machinery and devices for the developed oil and gas complex is great. Reorientation of a number of Tyumen' plans to produce products for the oil and gas workers and the builders is an objective need. This problem can be solved in some cases without significant expenditures for technical re-equipping. Thus, the instrument building plant at Tyumen' could be reoriented toward output of instruments for the needs of the oil and gas industry.

The timber and woodworking industry has been developed in Tyumenskaya Oblast. The export of wood exceeds 12 million m³ annually and the production of lumber is approximately two million m³ annually. At the same time the needs of the oil and gas complex for wood and products of the

woodworking industry are not being completely satisfied. There are low-capacity enterprises of Minlesprom [Ministry of the Timber and Wood Processing Industry of the USSR] in the oil-producing regions and creation of new lespromkhozes [expansion unknown] directly in this zone (for example, along the route of the Tobol'sk-Surgut Railroad) is being carried out slowly. As a result a considerable shortage of lumber was noted in these regions. Creation of lespromkhozes to support the needs of enterprises of the gas industry, construction organizations and other organizations has not yet been planned in the Pur and Taz river basins. The rates of development of enterprises to produce prefabricated wood houses of the container type and of lumber products are inadequate. All this makes it necessary to plan the development of the timber and woodworking industry in the TPK and to support the needs of the complex for wood and products of the woodworking industry by local production of them and elimination of inefficient shipments. Expansion of a number of sectors and complex development of them will increase the efficiency of the TPK.

The West Siberian oil and gas complex is the country's main base for oil and gas production; it has an appreciable effect on the state of the country's fuel and energy balance. It becomes necessary in this regard to form a special coordinating body for the given complex at the level of directive bodies. This body could be, for example, a Committee of the USSR Council of Ministers on problems of developing the West Siberian oil and gas complex.

Improving the management structure of the West Siberian oil and gas complex is an important aspect in the system of measures to improve planning and to intensify the effect of the economic mechanism on increasing production efficiency and work quality.

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